

MONTHLY JOURNAL OF AGRICULTURE.

VOL. II.

APRIL, 1847.

NO. 10.

WASHINGTON'S ACCOUNT OF THE AGRICULTURAL ADVANTAGES OF THE UNITED STATES IN 1796.

[Correspondence on Agriculture between Sir JOHN SINCLAIR and Gen. WASHINGTON.]

AN ACCOUNT OF THE CIRCUMSTANCES which induced Sir
JOHN SINCLAIR to apply to General WASHINGTON for
information respecting the several States of North Amer-
ica, in the year 1796.

Edinburgh.
10th May 1821.

"AT the commencement of the year 1796, the aspect of public affairs in Great Britain became of the gloomiest description. Such was the success of the arms of France, and such the terror which they inspired, that the Continent seemed to be completely subdued; while the affairs of Great Britain itself were so unsuccessfully conducted as to give rise to the most serious apprehensions, in the minds of many, that it could not much longer continue the contest. The Minister who then governed this country (the Right Honorable William Pitt) was endowed with extraordinary talents and almost unequaled powers of eloquence. He was much better calculated, however, to shine in a popular assembly than to conduct a war, *more especially in conjunction with other States*, whom it was necessary to manage, to conciliate, and to rouse to the greatest possible exertions. He had not, himself, acquired any knowledge of foreign nations, and he would not listen to the communications of those who wished to give him *true information* respecting their characters and views—how far they might be depended on, and what they were capable of effecting. For some years I had been in habits of great intimacy with him, during which period every suggestion transmitted by me for his consideration was almost uniformly attended to. But latterly, from an inordinate confidence in his own resources, an unwillingness to listen to *disagreeable truths*, (which an independent character felt it his duty to state, when any occasion required it,) and a dislike to those who would not be *completely subservient to him* on all occasions, he all at once altered so much his style of behavior toward me that our connection together was dissolved.

"At that period of time, any person who did not believe in the *infallibility* of William Pitt was considered a species of public enemy. Disgusted with a nation which had thus submitted itself to the control of one individual, whom I considered in the light of a personal enemy, and seeing but little prospect that the country would be extricated from the difficulties in which it was involved, unless a different system was pursued, which was not very probable, I naturally thought it necessary to look out for an asylum for myself and family,

where we might live at a distance from the calamities of Europe, which seemed more likely to increase than to diminish. I was thence induced to apply to a most respectable correspondent (the President of the United States) to know what part of America was the most desirable as a place of residence for a British emigrant.

" This short narrative will explain to the reader the circumstances which led General Washington to transmit to me the following account of the several States of America. Owing to the difficulty, however, of removing a numerous family, and unwillingness to quit a country for which I had naturally a strong predilection, and whose commercial interests and agricultural prosperity I still hoped it might be in my power to promote, the plan of emigration to America was, after much deliberation, relinquished. This was attended with fortunate consequences to the country. The Minister was induced to adopt a measure recommended by me—that of issuing two millions of Exchequer bills, by the loan of which the commercial interest was saved from almost general bankruptcy—and soon afterward he supported with his influence the plan of instituting '*a Board of Agriculture*', moved by me in the House of Commons, where it met with considerable opposition, but whose establishment (to which the support of the Minister certainly materially contributed) I trust will form an important era in the history of the first of arts.

" It is only necessary to add that, by various accidents, neither the original copy nor the duplicate of the subjoined letter reached me; but, fortunately, '*a triplicate*' was sent, which safely arrived. It was accompanied by a letter, in General Washington's hand-writing, which I thought it proper to have engraved, 'That, with an account of the United States of America, drawn up by that great statesman, every public-spirited native of America might have it in his power not only to possess himself, but to bequeath to his posterity *the autograph* of the founder of American Independence, and of one who is justly ranked among the greatest and most illustrious characters the world has hitherto produced.' "

John Sinclair⁵
Born 10th May 1754.

Answer.

LETTER FROM HIS EXCELLENCY GENERAL WASHINGTON, to the Right Honorable Sir JOHN SINCLAIR, Baronet, containing an account of the several States of America, as they appeared calculated for the residence of a British emigrant, in the year 1796.

[Triplicate.]

PHILADELPHIA, 11th Dec., 1796.

Sir: The near view which you have of the Revolution in France, and of the political state of things in Europe, especially those of Great Britain, has enabled you to form a judgment, with so much more accuracy than I could do, of the probable result of the perturbated state of the countries which compose that quarter of the globe, and of the principal actors on that theatre, that it would be presumptuous in me, at the distance of 3,000 miles, to give an opinion relatively to either men or measures; and therefore I will proceed to the information required in your private letter of the 11th of September, which I will give from the best knowledge I possess, and with the candor you have a right to expect from me.

The United States, as you well know, are very extensive—more than 1,500 miles between the north-eastern and south-western extremities—all parts of which, from the sea-board to the Appalachian Mountains, (which divide the eastern from the western waters,) are entirely settled, though not as compactly as they are capable of, and settlements are progressing rapidly beyond them.

Within so great a space, you are not to be told that there is great variety of climates; and you will readily suppose, too, that there are all sorts of land, differently improved and of various prices, according to the quality of the soil; its

contiguity to, or remoteness from, navigation ; the nature of the improvements ; and other local circumstances. These premises, however, are only sufficient for the formation of a general opinion, for there are material deviations, as I shall mention hereafter.

In the New-England States, and to Pennsylvania inclusively, landed property is more divided than it is in the States south of them. The farms are smaller, the buildings and other improvements, generally better, and of consequence the population is greater. But, then, the climate, especially to the eastward of Hudson River, is cold, the winters long, consuming a great part of the summer's labor in support of their stocks during the winter. Nevertheless, it is a country abounding in grass, and sells much fine beef, besides exporting many horses to the West Indies. A mildew or blight (I am speaking now of the New-England States particularly) prevents them from raising wheat adequate to their own consumption ; and of other grains they export little or none, fish being their staple. They live well, notwithstanding, and are a happy people. Their numbers are not augmented by foreign emigrants, yet from their circumscribed limits, compact situation, and natural population, they are filling the western parts of the State of New-York, and the country on the Ohio, with their own surplusage.

New-Jersey is a small State, and all parts of it, except the south-western, are pleasant, healthy, and productive of all kinds of grain, &c. Being surrounded on two sides by New-York, and on the other two by Delaware River and the Atlantic, it has no land of its own to supply the surplus of its population ; of course their emigrations are principally toward the Ohio.

Pennsylvania is a large State, and from the policy of its founder, and of the Government since, and especially from the celebrity of Philadelphia, has become the general receptacle of foreigners from all countries, and of all descriptions, many of whom soon take an active part in the politics of the State ; and coming over full of prejudices against their own Governments—some against all Governments—you will be enabled, without any comment of mine, to draw your own inference of their conduct.

Delaware is a very small State, the greater part of which lies low, and is supposed to be unhealthy. The eastern shore of Maryland is similar thereto. The lands in both, however, are good.

But the western parts of the last-mentioned State, and of Virginia, quite to the line of North Carolina, above tide water, and more especially above the Blue Mountains, are similar to those of Pennsylvania between the Susquehanna and Potomac Rivers, in soil, climate and productions, and, in my opinion, will be considered, if it is not considered so already, as the garden of America ; forasmuch as it lies between the two extremes of heat and cold, partaking in a degree of the advantages of both, without feeling much the inconveniences of either, and with truth it may be said, is among the most fertile lands in America, east of the Appalachian Mountains.

The uplands of North and South Carolina and Georgia are not dissimilar in soil, but as they approach the lower latitudes, are less congenial to wheat, and are supposed to be proportionally more unhealthy. Toward the sea-board of all the Southern States, (and farther south the more so,) the country is low, sandy, and unhealthy ; for which reason I shall say little concerning them ; for, as I should not choose to be an inhabitant of them myself, I ought not to say anything that would induce others to be so.

This general description is furnished, that you may be enabled to form an idea of the *part* of the United States which would be most congenial to your inclination. To pronounce with any degree of precision what lands could be obtained for in the parts I have enumerated, is next to impossible, for the reasons I have before assigned ; but upon pretty good data it may be said that those in Pennsylvania are higher than those in Maryland, (and I believe in any other State,) declining in price as you go southerly, until the rice-swamps of South Carolina and Georgia are met with, and those are as much above the medium in price as they are below it in health. I understand, however, that from 30 to 40 dollars per acre (I fix on dollars because they apply equally to *all* the States, and because their relative value to sterling is well understood) may be denominated the medium price in the vicinity of the Susquehanna, in the State of Pennsylvania ; from 20 to 30 on the Potomac, in what is called the valley—that is, lying

between the North Mountain and the Blue Mountain, which are the richest lands we have, and less, as I have noticed before, as you proceed southerly. But what may appear singular, and was alluded to in the former part of this letter, the lands in the parts of which I am now speaking, on and contiguous to tide-water, (with local exceptions,) are in lower estimation than those which are above and more remote from navigation. The causes, however, are apparent—1. The land is better; 2. Higher and more healthy; 3. They are chiefly, if not altogether, in the occupation of farmers; 4. From a combination of all of them, purchasers are attracted, and of consequence the price rises in proportion to the demand.

The rise in the value of landed property, in this country, has been progressive ever since my attention has been turned to the subject, (now more than 40 years,) but for the last three or four of that period it has increased beyond all calculation; owing it part to the attachment to, and the confidence which the people are beginning to place in their form of Government, and to the prosperity of the country from a variety of concurring causes—none more than to the late high prices of its produce.

From what I have said, you will have perceived that the present prices of land in Pennsylvania are higher than they are in Maryland and Virginia, although they are not of superior quality. Two reasons have already been assigned for this: first, that in the settled part of it the land is divided into smaller farms, and more improved; and, secondly, being in a greater degree than any other the receptacle of emigrants, these receive the first impressions in Philadelphia, and rarely look beyond the limits of the State; but besides these, two other causes not a little operative may be added, namely, that until Congress passed general laws, relative to naturalization and citizenship, foreigners found it easier to obtain the privileges announced to them in that State than elsewhere; and because there are laws here for the gradual abolition of slavery, which neither of the two States above mentioned have at present, but which nothing is more certain than that they must have, and at a period not remote.

Notwithstanding these obstacles, and although I may incur the charge of partiality in hazarding such an opinion, at *this time*, I do not hesitate to pronounce that the lands on the waters of Potomac will in a few years be in greater demand and in higher estimation than in any other part of the United States. But as I ought not to advance this doctrine without assigning reasons for it, I will request you to examine a general map of the United States, and the following facts will strike you at first view: That they lie in the most temperate latitude of the United States; that the main river runs in a direct course to the expanded part of the western country, and approximates nearer to the principal branches of the Ohio than any other eastern water, and of course must become a great, if not (under all circumstances) the best highway into that region; that the upper seaport of the Potomac is considerably nearer to a large portion of the State of Pennsylvania than that portion is to Philadelphia, besides accommodating the settlers thereof with inland navigation for more than 200 miles; that the amazing extent of tide navigation afforded by the bay and rivers of Chesapeake has scarcely a parallel. When to these are added, that a site at the junction of the inland and tide navigations of that river is chosen for the permanent seat of the General Government, and is in rapid preparation for its reception; that the inland navigation of the river is nearly completed to the extent above mentioned; that its lateral branches are capable of great improvement at a small expense, through the most fertile parts of Virginia, in a southerly direction, and crossing Maryland and extending into Pennsylvania in a northerly one, through which (independent of what may come from the western country) an immensity of produce will be water-borne, thereby making the Federal city the great emporium of the United States—I say when these things are taken into consideration, I am under no apprehension of having the opinion I have given relative to the value of land on Potomac controverted by impartial men.

There are farms always and everywhere for sale; if, therefore, events should induce you to cast an eye toward America, there need be no apprehension of your being accommodated to your liking: and if I could be made useful to you therein, you might command my services with the greatest freedom.

Within full view of Mount Vernon, separated therefrom by water only, is one

of the most beautiful seats on the river, for sale, but of greater magnitude than you seem to have contemplated. It is called Belvoir, and did belong to George William Fairfax, Esq., who, was he living, would now be Baron of Cameron, as his younger brother in this country (George William dying without issue) at present is, though he does not take on himself the title.

This seat was the residence of the above named gentleman before he went to England, and was accommodated with very good buildings, which were burned soon after he left them. There are near 2,000 acres of land belonging to the tract, surrounded in a manner by water. The mansion-house stood on high and commanding ground. The soil is not of the first quality, but a considerable part of it lying level may, with proper management, be profitably cultivated. There are some small tenements on the estate, but the greater part thereof is in wood. At present it belongs to Ferdinando Fairfax, son of Bryan Fairfax, the gentleman who will not, as I said before, take upon himself the title of Baron of Cameron. A year or two ago the price he fixed on the land was (as I have been informed) $33\frac{1}{2}$ dollars per acre; whether not getting that sum, or whether he is no longer disposed to sell it, I am unable with precision to say; for I have heard nothing concerning his intentions lately.

With respect to the tenements I have offered to let, appertaining to my Mount Vernon estate, I can give no better description of them and of their appurtenances, than what is contained in the printed advertisement herewith inclosed; but, that you may have a more distinct view of the farms, and their relative situation to the mansion-house, a sketch from actual survey is also inclosed; annexed to which I have given you, from memory, the relative situation and form of the seat at Belvoir.

The terms on which I had authorized the superintendent of my concerns at Mount Vernon to lease the farms there, are also inclosed; which, with the other papers and the general information herein detailed, will throw all the light I am enabled to give you upon the subject of your inquiry. To have such a tenant as Sir John Sinclair, however desirable it might be, is an honor I dare not hope for; and to alienate any part of the fee-simple estate of Mount Vernon is a measure I am not inclined to, as all the farms are connected and parts of a whole.

With very great esteem and respect I have the honor to be, Sir,
Your most obedient and obliged h'ble servant,

G. WASHINGTON.

P. S. As I shall have an opportunity in the course of the present Session of Congress to converse with the members thereof from different States, and different parts of each State, I will write you a supplementary account, if essential information should be obtained in addition to, or corrective of, what is given to you in the foregoing sheets.

The first public allusion to the preceding correspondence, between the founder and first President of the British Board of Agriculture and the illustrious Farmer of Mount Vernon, is to be found in a letter addressed by the former to the Editor, then of the American Farmer, and now of this journal. It was published in the former paper twenty-six years ago—nearly two years after its establishment.

In that letter he says: "I think it right to add, that owing to some peculiar circumstances, I have in my possession a description of the States of America drawn up by the '*illustrious Washington*' himself. I have some thoughts of publishing that most valuable and curious document, that every true American may be able to possess an account of his native country, from the pen and sanctioned by the signature of '*its greatest ornament.*'"

With the names of SINCLAIR and WASHINGTON there are associations too interesting to every true patriot and friend of Agriculture, to make any apology necessary for appropriating to these documents, now more than fifty years old, the space we have assigned them—even though, as may be admitted, they may not directly conduce to any sheerly profitable result, which some would contend everything should do which is offered for perusal to practical Farmers. As if

they alone of all creation, whose physical labors are the most incessant, should have neither relish nor opportunity for any intellectual recreation.

In the course of their subsequent correspondence, on topics mutually engaging, Sir John Sinclair sent to Mr. Skinner what purports to be a fac-simile copy of Gen. Washington's letter, together with an *original* letter, of which our publishers have here given a fac-simile. With these, the Baronet sent also his own original and interesting "statement of the circumstances" which led to his reception of the Washington letter. This statement is now published, probably, for the first time, though the letter, we believe, is in Sparks's Collection. With these documents came the sketch of a *Monument*, which it was proposed to have erected to Washington at *Caithness*, Scotland. Sir John Sinclair evidently anticipated that the proceeds from the sale of these documents to Americans would be very considerable, as he recommended them to be printed in an attractive form, and the type to be "kept standing."—"The inclosed letter should be printed in a large type, so as to fill as large a space as possible—the press should be kept standing, so as to supply any demand." It seems somewhat strange that he did not suggest or allude to its being stereotyped, since that process had been perfected and brought into general use twenty years before; and the more so, as among the most prominent in this great improvement, were artists *Ged*, *Tulloch* and *Foulis*, of Edinburgh and Glasgow, in his own country.

It was the expressed wish of the venerable Baronet, that the publication should be dedicated, if his permission could be had, to that eminently pure patriot, Col. MONROE, then President of the United States, with whom he claimed to be distantly related.

For certain reasons, the project of the publication was not carried out.

It is not a little curious now, after the lapse of more than half a century, to compare the state and prospects of the country, as they then appeared in the view of General Washington, with its subsequent unparalleled growth in population and extension to—the Lord only knows where!

Not without significance is his remark in the close of his sketch of Pennsylvania. Not foreseeing the effect of the public works, on which the great and ever-swelling tide of European emigration is now floated on to the great, cheap, fertile, and illimitable West, his anticipations for Western Virginia were very natural; and but for the forecast and influence of BAYARD, and CLINTON, and VAN RENSSELAER, and their powerful associates, in opening the "big Ditch," his predictions for the Old Dominion would ere this have been measurably fulfilled. Nor are we sure that those who have gone farther have not fared worse than if they had settled there, "above the Blue mountains, between the two extremes of heat and cold." What glorious fields that old Mother of States has kept, and still keeps open, for every industrial enterprise! Can nothing break the malign spell, whatever it be, that keeps them from being occupied? If by a unanimous vote, in the fervor of her well-tried patriotism, she can bestow \$10,000 to fit out a single Federal regiment, for distant wars, can she not find an equal sum for the establishment of a *Normal School of Agriculture*, at the seat of her Government, in which the Youth of the State might be prepared to develop her rich resources, by being thoroughly instructed in natural and mechanical philosophy, chemistry, geology, mineralogy, animal and vegetable physiology, civil engineering, practical surveying, and rural architecture of all descriptions? But alas!—

As to what the General says of the Southern States, then extending only to

the southern line of Georgia : "As I would not choose to be an inhabitant of them myself, I ought not to say anything that would induce others to be so"—doubtless he thought as he spoke ; but where in this country of ours, which is fast getting to be "some," is there such a delicious climate for three-fourths of the year ? so genial ! so hospitable ! And then, such a people—true descendants of the Cavalier stock—with hearts warm and generous as their clime ; and as for their *women* !—what lighted up so brightly the darkest periods of the Revolution, as the fortitude and humanity of Southern matrons ?

So well did Washington's ablest coadjutor think of the South, after years of marching and counter-marching, fighting and running and fighting again, in sunshine and in rain, that he, the "*Quaker*" General, GREENE, chose it for his permanent residence. True, he died there ; and do not men die everywhere ? Are we not told that "*all flesh is as grass* ?"

The last reason assigned by WASHINGTON for the higher price of land in Pennsylvania, than in Maryland and Virginia, will not fail to attract the notice of the observant reader, and is as true now as it was then : "And because there are laws there for the gradual abolition of Slavery, which neither of the two States above mentioned have at present, but which nothing is more certain than that they must have, and at a period not remote." Such was the opinion, not only of Washington, but of Marshall, of Jefferson, and Madison and Monroe, and all the brightest luminaries in those brightest days of this Republic. Let the inquirer who would know why it is that his prophecies have not been fulfilled, ask those fanatical reformers, who in all ages have allowed their zeal to outrun all discretion. But has it not been said, time out of mind, that where God sends meat, there the Devil is sure to send cooks ?

That his anticipations in respect of the lands on the tributaries of the Chesapeake would have been realized, if at a time then "not remote" Slavery had been removed from the State, many of the best informed of his countrymen still believe ; for what portions of this Union can be compared with Delaware, Maryland and Virginia, for climate and facilities to bring forward their products in advance of all other places of equal contiguity to domestic markets, and open at all seasons to the ocean, to take advantage of all favorable changes in the markets abroad ? But the fact is, that slave-labor cannot be *profitably* employed in alliance with *grain staples* ! Where the crops are to be labored almost the entire year, and where to some of its processes every species of force may be applied, so that nearly every consumer is also a worker—sustenance and production thus going hand in hand—the case is quite different ; and in no agricultural field is the labor of a given number of operatives applied with more system, exactness, efficiency and profit, than on large *plantation estates*. But we only meant to explain the "circumstances" under which this correspondence came into our possession, and not to comment on it. The "statement" of the great founder of the renowned Board of Agriculture is, we believe, both original and curious in its items of history, political and biographical. But as for the idea of a perishable pile of stone and mortar in memory of one whose renown is but compacted and polished by the hand of Time, that destroyeth all things else, types and history may be safely left to do their office. While these can speak, his name will be carried down with increasing admiration to posterity. The very vices of succeeding ages will increase its lustre.

JUDGE BUEL AND EDMUND RUFFIN.

THE Editor of THE FARMERS' LIBRARY, with due deference, suggests to the NEW-YORK STATE AGRICULTURAL SOCIETY the propriety of awarding every year, for some important and worthy display of agricultural excellence, a suitable and characteristic premium, to be known and contended for, as the

BUEL PREMIUM.

While gold medals, and costly swords, and elevated rank are bestowed by the wise men of the nation out of the public funds, for distinguished success in fields of battle and blood ; and gallant men are stimulated to excellence in that way, by the public bestowal of magnificent rewards, high pay, and merited honors for themselves and pensions for their families ; would it be out of place, we ask it most respectfully, in you, who are appointed to watch over the landed interest, to offer every year your leading premium in honor of him who labored so long, so zealously, and with so much effect, to turn the minds of the young generation to ways of peace and usefulness : and to look on Agriculture not as a mean drudgery, in which any clown might succeed with strong back and strong arms, but as a business demanding high and varied mental attainments, and eminently conducive to private and public morals ?

The object might be for the best cultivated farm, or a labor-saving implement or machine, displaying something *new* and economical in its construction. Anything but the fattest hog, or the heaviest half-acre of corn or carrots, or the fattest bullock or biggest turnips ; unless the animal or the vegetable be reared on some new and, hitherto, untried food, or new mode of preparing it, constituting altogether a *novel and useful discovery in rural economy*. And as Mr. RUFFIN—whose works have been deemed worthy of being pirated on the other side of the great water—does not live in the State, but has added immensely to American agricultural literature and products, it would, we most respectfully suggest, evince a commendable liberality and enlarged views to offer a similar premium, to be called the

RUFFIN PREMIUM.

If Agriculturists would have their calling respected, let them lose no occasion to *stand up for themselves*. We respectfully submit the same suggestion to the American Institute, that being, in its very name, a national institution.

Each might offer premiums, too, to be called after their *successive Presidents*. It would seem to be but a fit compliment to those who must be presumed to have risen entirely by their usefulness and liberality, to the head of such institutions.

There might also be the *Van Rensselaer*, and the *Clinton*, and the *Wadsworth* medals, for these were all great promoters of education and agricultural improvements. As nothing is to be expected from Government to reward or honor great promoters of industrial pursuits, let societies use every occasion to make their names honorably familiar to posterity, if only to excite emulation. What was the fate of ROBERT MORRIS, without whose *financiering* there could have been no fighting ?—The man to whose financial operations the Americans were said to owe as much as to the negotiations of Franklin, or even the arms of Washington, was allowed by his country to pass the latter years of his life *in prison—confined for debt !*

MASSACHUSETTS AGRICULTURE.

ESSEX COUNTY.

Plowing with Double Teams—Single Teams—Subsoil-Plowing—Working Oxen—Milch Cows and Heifers—
The Dairy.

HAVING in a previous number given some account of the last doings of the old Massachusetts *State Society*, we come now to the *Abstract* of the proceedings of the County Societies, as exhibited by the returns of their officers, under the law requiring them to make report to the office of the Secretary of State, not only of what disposition they have made and propose to make of the funds derived from the State, but to "accompany the same with such general observations concerning the state of Agriculture and manufactures in the State as they may deem important or useful."

We stop a moment to remark, that even here the Agricultural Society is charged to look after another interest besides its own—"concerning the state of Agriculture and manufactures." Now to this we are entering no objection, but in all the annals of industrial associations, have we ever seen a manufacturing, or commercial, or mechanical association charged by the law-making power to look after *Agriculture*? Well, let that pass! It is from these Reports and observations that we select what follows, being guided by what it is supposed may be most generally acceptable and useful, if not new, more particularly to readers without than within that venerable Commonwealth—a Commonwealth of which Mr. Colman has beautifully and truly written : "Let the children of Massachusetts, then, love and honor their good old Mother. Her soil may be hard, but labor compels it to be bountiful. Her climate may be harsh, but it gives strength and elasticity to the muscles, and the brightness of its own stars to the mind. Her voice in winter may be sometimes hoarse, and her face wrinkled and frowning; but her children will not love her the less for a sternness of discipline by which she trains them up in habits of unremitting labor and self-dependence, and thus qualifies them to be blessings and ornaments of their own community, the substantial pillars of the federal edifice, and the pioneers of learning, civilization, humanity and religion in the boundless West." And first, of the

ESSEX COUNTY SOCIETY.

Whose Report is said to be the "most complete," that Society having from its long experience in publishing annually a volume of its transactions, attained a high rank in the fullness of its Reports and the exactness of its statements.

PLOWING WITH DOUBLE TEAMS.—At the Cattle-Show, Sept. 24, 1845, there were thirteen competitors, and the quarter of an acre assigned to each was to be plowed not *less than seven inches deep*, and was done in from thirty-five to forty minutes. Notwithstanding, say the Committee of Judges, (who in Massachusetts are themselves many of them habituated to the use of the plow,) these trials have been so often repeated, (more than twenty years,) they are still received with increasing interest, and (listen, you of the stand-still school,) "*every succeeding year brings to notice some valuable improvement.*" Now how, but by being printed, and thus taking the form of that "book knowledge" so much

sneered at, would these "*improvements*" which "every year brings to notice," get to be widely known and available?

The Committee proceed to remark, that they are strongly impressed with the superior value of those plows which lay the furrow-slice *flat* and even, especially in the cultivation of grass. The trials which we have witnessed in Massachusetts have generally been in tough old sward-land. The harrow is afterward brought into play. It fills up all the chinks, makes smooth work, and the succeeding crop is planted or sowed on the sod thus inverted, without disturbing it; and as the grass and its roots perish and rot, the succeeding crop gets the whole benefit.

PLOWING WITH SINGLE TEAMS.—The experiments detailed go to show that an acre of land may be plowed by a single yoke of cattle and one man in four hours, and "probably nearly two acres in a day." The Committee ask whether it would not be better when two pair are employed instead of one, to use them separately, applying the second pair to a *subsoil-plow* to follow the first one. This must somewhat depend on the depth of the *soil*. In Worcester County, where this whole business is as well understood as in any part of the world, the premiums are limited to *one* pair of cattle without a driver. By driver is meant, not the plowman, but one who attends him to lead and urge forward the team. A plowing-match at Worcester is the most beautiful and impressive of all agricultural operations. Nothing can exceed the quiet self-possession, calmness and docility of the plowman and his team. It is indeed to be remarked of the ox that he never commits the blunder of going to the right when ordered to the left, or *vice versa*. His instincts are infallible.

SUBSOIL-PLOWING.—The only entry of subsoil-plows was made by **BENJAMIN POOR**, of Indian Hill farm, West Newbury, and distinguished as the winner of the premium for the best cultivated farm in the State submitted for inspection—an honor that in any highly enlightened and virtuous Republic, would win higher social and political reward than the most triumphant success on the ensanguined field of battle. The Society acknowledged their obligations for being often indebted to Mr. P. for contributions to its Shows.

The Committee close their Report with the general remark: "Farmers everywhere, who have tried subsoil-plowing, concur in representing it as beneficial in draining wet lands, and in counteracting the effects of drouth on dry soils; and your Committee believe its advantages will be made apparent to all who will make a trial of it."

WORKING OXEN.—This term in Massachusetts seems to be applied, where premiums are offered, exclusively to oxen working in carts, hauling heavy loads to test their strength. It is only where oxen are so almost exclusively used that men get to be versed in the niceties that come into consideration in awarding premiums to the best.

The highest premium was awarded to "Jonathan Berry, Jr., of Middletown, for his speckled-face cattle, *five years old*." They were "large of their age, well formed, not full in flesh, well matched as to temper, and well trained for *cattle of that age*." One important point is, that they should work "even and true."

MILCH COWS AND HEIFERS.—All that were entered for premiums were of "native breed." The first premium was awarded to **HENRY CRESSY** for a cow six years old, and as readers generally may be curious to know some particulars of a premium cow in old Essex, Massachusetts, Hon. *Timothy Pickering's county*,

we give Mr. Cressy's statement: "She calved 21st May, and gave milk as follows:

From May 21 to June 21	Milk 1,469 lbs. 4 oz.
" June 21 to July 21.....	" 1,264 " 8 "
" July 21 to August 21.....	" 1,127 " 8 "
" August 21 to September 21	" 956 " 8 "
Total in four months.....	" 4,817 lbs. 4 oz.

Mr. Cressy says he sold most of her milk, but he found by experiment that 19 pounds of it would yield one pound of butter. At that rate, she would have yielded in the four months 253 pounds of butter, or something more than two pounds a day. He stated as to her keeping, that it had been "good grass feed, with the exception of seven weeks, when she had two quarts of shorts per day." How much more valuable such a cow, so fed or pastured, than half a dozen such as we have in many of the States, which in summer yield a scanty supply of butter, and in winter give scarcely cream enough for their coffee! Nothing *pays better*, in the whole round of domestic economy, than a *little extra feed* and care, shelter and shorts, with a *dust of Indian meal*, to a *good cow*.

Mr. WARREN AVERILL took the second premium. His cow was six years old. She calved 21st April. The calf was kept to 13th May. With what milk "the calf left" until that time, and all afterward to 20th May, one month, she produced *twenty pounds eight ounces of butter*. In the four succeeding months she gave 4,375 pounds of milk, that yielded 211 lbs. 2 oz. butter; being something more than twenty pounds of milk to one of butter. Her feed was pasture only, except from 30th of August, when he began giving her 1 quart of Indian and 1 quart of rye meal every night.

WILLIAM WILLIAMS took the third premium for a cow whose calf he sold for \$10 at 6 weeks and 3 days old; and during these six weeks he sold 52 quarts of milk and got 7½ lbs. of butter from her. She gave, from the time the calf was taken from her, from 14 to 15 quarts of milk a day for a few days over four months. She calved 6th Feb., 1845, and on the 23d Sept. she was giving 8 quarts a day. Her keep was salt hay until she calved; then one feed of "English hay," at noon, and half a bushel of carrots per day for two months; after that no carrots, but one feed of English hay at noon, and salt hay night and morning until "pasture time." "The first two weeks after she calved she gave 10 qts. of milk daily more than the calf could suck." P. S. She made 9 lbs. of butter per week till pasture time; then the milk was put with that of the rest of my cows."

The reader may here see how valuable is even one cow in a family, when of good quality and *well kept*; but these "pastures" in Massachusetts are generally well set in old English grass, one acre of it bearing more milk-producing grass than six of ordinary pasture in some other old States. How valuable will "THE Cow Book" prove, in process of time, to all who thus rely on the cow for the sustenance of their families and for a portion of their income, supposing the signs laid down in it to prove as infallible as they have been found by Mr. Brooks, a practical farmer of the highest respectability, whose letter we published, and whose testimony has been corroborated by several others who, without going so much into detail, have assured us that with this book in hand they have tested the theory far enough to have no fear of being imposed on with an indifferent cow. As we desire in all cases to arrive at the exact truth, we respectfully request that the Trustees of all Societies would place *The Cow Book* in the hands of their Committees appointed to award premiums, with instructions to see how

far the theory is borne out. Should this fall under the eye of Mr. PHINNEY, we take leave to ask the favor of him to apply the signs to the imported and other cows, when convenient. The book is in great demand in the Eastern States.

And now, having got through with the ESSEX PREMIUM Cows, and shown to our southern friends "what they are like," we proceed to the Report

ON THE DAIRY.—Premiums were awarded for 1st, 2d and 3d best *June* butter, and same for *September* butter. As the reader may be curious to know the process and the quantity, we will give the statements of the two gentlemen who took the first prize in each case. Although other processes may be as good, it is fair to presume those to be at least equal to the best, who, following them, took the highest premium, for quality and quantity combined. Thus, as to the June butter, we give GEORGE W. DODGE's statement:

GEORGE W. DODGE'S STATEMENT.

I present for your inspection one box of June butter, containing 25 lbs., being a specimen of 132 lbs. made between the 1st of June and the 9th of July, from 5 cows; also, 2 boxes of September butter, containing 27 lbs., being a specimen of 405 lbs. made between the 20th of May and the 20th of September, from the same cows. Their feed has been common pasture until August; since then, the pasture being very poor and dry, we have fed them night and morning with green corn fodder, which was raised for the purpose.

PROCESS OF MAKING.—The milk is strained into tin pans, where it stands from 36 to 48 hours. It is then skimmed and the cream put into tin pails, standing on the bottom of

the cellar; a little salt is put into the pails before putting in the cream, which, at the times of addition, is stirred. We churn twice a week. The buttermilk is thoroughly worked out by hand, no water being used for that purpose. In warm weather, the cream is lowered into the well the night before churning. Immediately after the buttermilk is worked out, the butter is salted with an ounce of ground rock-salt to the pound, and in about 24 hours it is again worked over.

N. B. The June butter is packed down in layers of five pounds each, and salt sprinkled between; the top is covered with salt, and the pot is set on the bottom of the cellar.

Wenham, Sept. 24, 1845.

For the *September butter* the first premium was awarded to WARREN AVERILL, Esq. It will be observed that in one case the buttermilk is worked out by *hand*, and in the other *washed* out with water, so that this long mooted point is yet in abeyance:

WARREN AVERILL'S STATEMENT.

I offer for your inspection one pot and box of September butter, containing 32 lbs., being a specimen of 211 lbs. 2 oz. made from one cow since the 20th day of May until the 29th day of September, inclusive.

PROCESS OF MAKING.—The milk is strained into tin pans, and stands from 24 to 36 hours in a cellar, when the cream is taken off and put into a tin pail. We churn, the first part of the season, once in four days; the latter part, once a week. The cream is brought from the cellar in the morning, and strained through a cloth into the churn. After it is churned, (which has taken, on an average, seven minutes,) the butter is taken out of the churn, put into an earthen pan, and water put with it. This is repeated until the butter-

milk is thoroughly rinsed from the butter, so that there is scarcely any color in the water. The butter is then worked over. Then it is put into an earthen pan, and salted with one ounce of salt to a pound of butter. It is then worked over again thoroughly, piece by piece, then made into balls and put into the cellar, fit for market.

I keep two cows, Flora and Kendall.—Flora I keep for butter; Kendall I keep for milk to sell, and use in the family. Flora has made 211 lbs. 2 oz. of butter since the 20th day of May to the 20th day of September, inclusive.

Ipswich, Sept. 23, 1845.

Note.—The manner of keeping the above cow and her yield of milk are given in a preceding statement.

Among other branches that remain to be touched upon to show what is deemed the right thing in New-England, we shall have to present from this Abstract notices of Meadow and Swamp Lands—Premium Farms—Fruit Trees—Lime—Fences, and Vegetables.

FARMERS' CLUB IN FAIRFAX COUNTY, VIRGINIA.

SETTLEMENT OF NORTHERN FARMERS IN THAT REGION.

HAVING heard contradictory accounts of the progress of emigration from the North into Fairfax County, Virginia, and very different statements as to the success of the movement, and whether their northern systems and habits had been maintained and become contagious in their new abodes, or whether they had laid them down and taken up those of the sons and daughters of the Old Dominion, we have been anxious to make personal observation to ascertain the exact "state of the case"—more especially as it would have afforded the occasion for brightening the chain of affection with some old friends in that quarter; but so far we have found it impossible to find time enough to gratify our wishes in that respect. Aware that a gentleman from New-York, every way reliable, respected wherever known, and well qualified to give the information, had joined the settlers from that State, we addressed him a letter, of which we have no copy, but the tenor and purport of it may be easily inferred from the contents of the following:

J. S. SKINNER, Esq.

LAKE BORGNE PLACE, PROSPECT HILL, Fairfax Co., Va., 15th Jan. 1847.

Dear Sir : In part compliance with the request contained in your letter of the 5th inst., I transmit you herewith a condensed outline of the Constitution of the Farmers' Association formed in our neighborhood, and a general sketch of the progress and results of northern and eastern emigration to this portion of Virginia, so far as I have been able to collect the same.

1. The general objects of our Association are declared to be "the acquisition and diffusion of useful and practical knowledge in reference to agricultural science; the most approved and successful modes of farm husbandry in all its departments; the most profitable, judicious and economical application of labor and capital in tilling the soil; and the general relation and connection of physical, moral, political and social science with agricultural improvement." Its officers consist of a President, two Vice Presidents, a Corresponding and Recording Secretary, a Treasurer and Librarian; together with a Standing Committee of three, charged with the selection and arrangement of topics for discussion and the obtaining of occasional lecturers, &c. The meetings are held monthly, and in the evening; the officers are annually elected; and the topics for discussion are taken up in their order as reported from time to time by the Committee, and may be preceded or followed by resolutions embracing the sense of the Association, or of the member presenting them, on the subject matter under consideration. The payment of fifty cents on subscribing the Constitution, and the same amount quarterly thereafter, constitutes the sole condition of membership.

2. In reference to "the number of actual settlers from the North within a given number of years, the quantity of land each has purchased, and the prices given"—I am not prepared, at this time, to furnish you with that full and accurate statistical information which I hope to be able at a future period to accomplish through the agency of investigation to be set on foot by our Association. By information, however, derived from the very intelligent Clerk of our County Court, S. M. Ball, Esq., and from other reliable sources, I am enabled to state that not less than two hundred families have removed into this single county from the Northern and Eastern States within the past five years, and are now domesticated here, without the remotest intention, wish, or desire, so far as I can learn, to "take the back track"—that upward of \$200,000 in the aggregate have been invested by them in the purchase of land for farming purposes; and that the amount paid per acre for such land would not exceed, on an average, from \$5 to \$8. The highest price ascertained to be paid is \$26 for an improved farm of two hundred acres, with buildings originally costing \$7,000, and the present value of which could not fall short of \$4,000. Lands of the best quality, with ordinary improvements, may be obtained at prices varying

from \$10 to \$20 per acre, and large tracts of unimproved, but naturally fertile soils, are in market for from \$2 to \$5 per acre. The quantity of land taken up by the settlers respectively, varies greatly, many purchasing from five hundred to a thousand, and even two thousand acres, with a view to future speculation; and others being governed in this respect by their means, their peculiar views of farming operations, and their probable prospects of realizing compensating profits on the capital and labor invested. Probably the greatest number of settlers have contented themselves with from one hundred to one hundred and fifty acres, although there are several with twenty-five, thirty, forty and fifty acres, who find themselves "well to do in the world" with these humble allotments, and who contrive by a thorough and systematic cultivation of every portion of their domains to compensate for their limited area when compared with that of their neighbors.

3. With regard to the average products of these lands, and their comparative productiveness under their former and present owners, I am not in possession of sufficient means of information to speak with any certainty; and probably a sufficient length of time has not yet elapsed since the change to afford the requisite materials for determining this point. In the greater number of instances, I am inclined to the opinion that an injudicious and exhausting process of tillage, unaccompanied by the application of fertilizing manures, has rendered the work of reclamation a slow one, and that at least a period of from two to five years will be required to place the soil in a condition for testing its capabilities of production.

4. The improvements already introduced by the new settlers in buildings, processes of labor, agricultural implements, &c., are very perceptible and obvious; and it is easy for the passing traveler in any portion of this county to distinguish, at a glance, as he rides by, the farms belonging to the "Yankees," from those of the original settlers. In fact, in many instances, he may travel for miles without discovering any other but these "Yankee" settlements, the "steadings" of the Virginians being generally remote from the road and for the most part out of view, while the Northerner uniformly locates within a few rods, at farthest, from the highway, that he may "have an eye to windward," and know "what is going on." There is likewise a very manifest difference between the architectural taste of the two "people" in the erection, arrangement and conveniences of the family mansion—the advantage being decidedly in favor of the North. Seldom, moreover, do you find a good, substantial barn, on a Virginian farm of ordinary pretensions. Never do you find a Yankee without one, even though its expense may seriously cripple and retard the construction of his dwelling. The vast, lumbering, unsightly and cumbrous market-wagon of the Virginian, with its retinue of five powerful horses, surmounted by "out-riders," and filled with supplies adequate to the relief of any ordinary garrison, to say nothing of beds and bedding for the accommodation of men, women and children, during the journey of two or three days and nights to the market town, is wholly unknown to the enterprising and ingenious Yankee; nor could he by any possibility be made to believe that his two-horse lumber-wagon could not easily transfer to Washington and Georgetown, in a single day, at least twice the quantity and value stowed in these immense and formidable machines. As to the matter of fact involved in these rival pretensions, I cannot undertake to determine; but I "opine" that ten years hence the present market-wagon of Fairfax County will be ranked among the *curiosities* of the past. Sure I am that a New-Yorker who had never witnessed a similar vehicle would stare with amazement upon its enormous volume and its intricate machinery; and that the advent of such a wagon, accompanied with all its "fixins," in Broadway, would create a sensation at least equal to that with which the good citizens of Newburgh on the Hudson surveyed the first steamboat which anchored opposite their goodly town.

5. The wages ordinarily paid for free labor in this vicinity are from seventy-five cents to one dollar per day; and so far as my own experience goes, and my information extends, no difficulty exists in obtaining this species of labor for all the various purposes for which it may be required.

6. The "proximity of slaves and slavery," except so far as this institution is to be regarded in a moral point of view, and in connection with the principles of a sound and enlightened political and social economy, is by no means "offensive" or "annoying" to our people, under the circumstances in which they find them-

selves placed. In fact, it seldom obtrudes itself upon their observation, unless they voluntarily go in search of it; and when they come in contact with it, in the ordinary interchange of the civilities and amenities of life, they possess too much good sense and entertain too just an appreciation of what is due to the courtesies and reciprocal obligations of social intercourse to volunteer their opinions, unsolicited, upon the abstract question of its justification. When called upon in a proper manner and on an appropriate occasion to express their sentiments on this head, they do so, without offence being given or received; nor have I perceived any unwillingness on the part of the owners and holders of slaves freely to discuss this topic in all its relations, to "define their position," and to combat, temperately, courteously and dispassionately, the views of those who entertain opinions and convictions on this subject different from their own. The treatment of the slaves, so far as it has come under my personal observation, presents none of those repulsive features so frequently insisted upon by northern abolitionists. Their hours of labor, clothing, food, attendance in sickness, moral and religious culture, are, in all respects, upon a par, at least, with the ordinary class of day laborers at the North; and the only difference—a difference, indeed, not to be estimated in silver or gold, "or all this earth can afford"—consists in the hopeless servitude of the one, and the entire physical freedom of the other.

7. Unslaked stone-lime commands at Georgetown and Washington, our nearest markets—a distance of from four to ten and fifteen miles from the farms of our northern settlers—twenty cents per bushel, or from fifty to sixty cents per barrel of three bushels.

8. I am not aware that any experiments have, as yet, been instituted in this neighborhood, with a view of testing the efficacy of plaster alone, as a fertilizer or a manure. Wherever it has been resorted to, however, in aid of and in combination with the ordinary farm-yard manures, the most beneficial results have ensued, and a more abundant and valuable crop has been secured than might under ordinary circumstances have been depended upon from simple manures alone, without the agency either of plaster or lime. Very few farmers, however, who are desirous of permanently improving their lands and developing their resources to the best advantage, neglect a liberal sprinkling of lime—unless an abundant supply of marl is conveniently accessible, and the resources of the barn-yard are ample. From fifty to one hundred bushels of the carbonate of lime to the acre, either as a top-dressing or plowed in and left to itself during the interval between fall and spring plowing is regarded by the most competent and experienced judges as the most suitable preparation for reclaiming exhausted soils; after which an abundant supply of plaster, accompanied with yard manure and an occasional turning-under of clover, buckwheat or peas—not forgetting a resort, now and then, to the subsoil-plow—will effectually prepare the ground for a luxuriant and abundant crop.

9. Very few purchases, so far as I have been able to ascertain, have been made in this quarter by northern or eastern men for purposes of mere pecuniary speculation. In several instances a greater quantity of land has been taken up than was needed for agricultural purposes by the purchaser; but this was almost invariably because in this way a much more advantageous bargain could be effected with the original proprietor; and the purchaser, being himself a bona fide settler, was well satisfied that within a brief period he should be able to dispose of any surplus beyond his own wants, to actual emigrants, at a reasonable advance. The low price at which valuable improved and unimproved lands are everywhere offered, forbid the supposition that the "land mania" of the West has as yet taken root among us.

I have thus, Sir, endeavored to answer, to the best of my ability, the various points presented by your letter; and shall be happy from time to time to furnish your readers with such specific information in reference to the climate, soil, capabilities and resources of this delightful and attractive region as may be in my power. If in any respect I may have erred, or shall hereafter err, in my estimates in any of these particulars, your own familiarity with this entire portion of the Union will enable you to set me in the right.

Very truly and respectfully your obt serv't, S. S. RANDALL.

[The gallant Commodore T. A. CATESBY JONES, who, it will be remembered, was superseded in the command of our Pacific squadron, or rather our squadron in the Pacific, and
(927)

ordered home to be tried for being rather too quick on the trigger, in capturing the town of Monterey, owns, by inheritance, a fine estate—one which he has made so—in this very part of the Old Dominion, and is, moreover, regarded as one of the most resolute pioneers, in the course of improvements so visible there within the last few years. We have understood that his field—not patch—of corn averaged, last year, not less than fifty bushels to the acre. Years have passed away, alas! too swiftly, since we remember to have been once and again at "the Pines," and to have enjoyed a *running* view of that then somewhat haggard looking region. It was not, however, be it confessed, under circumstances very favorable for a leisurely agricultural survey, as the reader may guess when we add that it was when we used to go out from Washington at the "first blush of day" with a set of choice spirits under command of our old friend "honest George," as General Jackson used to call him, upon neighborly and patriotic excursions, to beat up the quarters of the good farmers of Fairfax with a good pack of hounds, *purely to save their young pigs and poultry!*

"Oh! how glorious 'tis
To right th' oppressed and bring the felon vile
To just disgrace!"

Those were indeed glorious times, with the British Secretaries, the amiable and gentlemanly **ADAMS**, and the frank, hearty and indomitable **CRAWFORD** to lead us back to reunite at 6 around the mahogany of "Sir CHARLES VAUGHAN," there to do our duty most loyally to—his noble round of beef and his honest sherry!

"Alas! 'tis not easy to say *what* will bring to the mind
The joys that are fled and the friends left behind!"

In another part of Fairfax, lower down, near Mount Vernon, a considerable purchase, 2,000 acres, has recently been made by a party of "Friends" from Pennsylvania, to be cut up into small farms and cultivated with free labor. This may be an entering-wedge to the re-settlement of the country still lower down, which for twenty miles along the high-road has been in a manner abandoned—so that within a few years taxes have been paid or money received for *wolves' heads!* and the door of General Washington's pew two years ago had been put to the "base use" of being made to secure a free negro's poultry-house. The world does not present such a field for industry, enterprise and capital as Virginia. What is she doing to secure for the rising generation that *sort* of education which gives capacity for developing her inexhaustible and neglected resources?

Ed. Farm. Lib.]

STRAWBERRIES.—There is an object in the cultivation of this, and indeed in that of every other fruit, universally acknowledged to be worthy of attention, but seldom attended to, and that is, to have it in succession during a considerable time. It is a remarkable fact that since cultivators began to search for improved varieties by sowing seeds, not one *earlier than the old Scarlet has been obtained, while of fine late varieties we have abundance.* I believe the earliest now in cultivation is the Grove-end; next to that comes Keen's Seedling, and some other good sorts, and among them the delicious but neglected Carolina; and lastly, the Elton, which lasts a long time. The Alpine is both an early and late sort, and *carries on the succession till frost commences.* What is wanted is an early variety, and to this object cultivators should lend their attention. We have, as yet, no good pale or white variety, and one should be sought for. I have raised a considerable number, and one remarkably prolific, and lasting a long time; but they all wanted firmness and flavor. By perseverance, and many pursuing this object, a fine variety may at last be obtained. Although it has been stated in the *Chronicle* that strawberry plants would continue to yield good crops during many years with a little care, I am still of opinion that what I recommended many years ago is of use, viz., to *make new plantations every second year.* My reason for this recommendation was, that when the plants are left longer, new sorts rise among them from the seeds of berries that drop or are left, and thus the crops are, for the most part, deteriorated by mixture, and it may become difficult to recover the original variety. My practice was to plant in February, not to reckon a crop the same year, and to take two crops afterward; so that when I dug down the plants I had another set ready to produce. The public would be better served with this and other fruits, if they were not exposed to the sun in shop windows, and at the doors, but kept in a cool, shady place. The strawberries brought to the Edinburgh market, once famous, are now for the most part very inferior; and the effects of careless handling are so conspicuous as to be rather disgusting.

[Correspondence of an Edinburgh paper.

ALPACCA SHEEP.

THE WOOL TRADE OF ENGLAND IN 1846 IN PERUVIAN AND UNITED STATES WOOL.

IN answer to inquiries about this breed of Peruvian sheep, we scarcely know what to say. As in the case of the *revival* about *Guano*, it was no new story to us: More than twenty-five years ago, we not only published a beautiful history and description of these sheep, from the polished pen of WILLIAM DAVIS ROBINSON, but caused engravings to be made, from drawings supplied by him, characteristic not only of the *Alpacca*, but of the *Llama*, the *Vicuna*, and the *Haanaco*; with the costumes of the shepherds, both natives and descendants of European stock.

All these will be found in the 3d volume of the American Farmer, for which the sketches were expressly prepared by Mr. Robinson, then in New-York, his first letter being dated 28th of April, 1821.

There, too, will be found from Mr. Robinson, as elsewhere in the early volumes of that work from other sources, interesting accounts of the *Arracacha*—spoken of in the following letter—a vegetable, at that time, very highly recommended. General DEVEREUX, always prompt in doing kind and benevolent acts, sent home some of the roots, which were tried under the skillful care of Doctor G. B. SMITH of Baltimore, and by him “found wanting.”

If ever we should find the space at command, we will re-produce these essays on the Sheep of Peru, which Mr. Robinson was of opinion might be introduced with great advantage to the United States. For ourselves, we confess we have our doubts. In the East, the climate would seem to forbid; and in the South—say the mountains of Western Virginia, Carolina and Georgia, which God and Nature intended for sheep-walks, and woolen, and cotton, and iron manufactures—they would be in every way too much exposed. We are positive that in one of his lectures, or on some public occasion, Professor Johnson observed that a friend of his in Scotland had informed him that he had sufficiently experimented to convince him that the attempt to rear them, as a stock sheep in Scotland, *could not succeed*. How many attempts have been made in England, and with how little success? and they are not a people to fail, for want of either capital or care, skill or perseverance, in such things. See how they took hold of the *Guano*, when they got a few bags of it a few years since! Yet, twenty years or more ago, the writer of these lines told the whole story about *Guano*, too, from Ulloa and from Humboldt, and even gave the analysis of French chemists of the first renown, whose description has stood the test to this day—and, moreover, distributed two barrels of it. So that we had the history of its uses in Peru, an account of its constituents, and ample specimens for trial of the article itself. What more was needed? Look at the old volumes of the American Farmer. But no!—we are so eternally involved in party politics—every farmer ambitious to be a great little man—a magistrate, a judge of the Levy court, or a delegate—an ensign, a lieutenant, or a “noble captain” in his district or his county—or otherwise is so much taken up with ideas of “*moving to the West*” that he loses all, or, rather, never acquires any true relish for *his own native*

home and proper business. Nor is it much to be wondered at. For are not our young men brought up as if purposely in contempt of the plow, and all that belongs to it? Do they hear anything of it at school? Is it made by their wise farmer-parents to form any part of their education? Do they hear anything said of Agriculture in any of our halls of Legislation? Any honors awarded for excellence in killing noxious weeds and insects, or for fat sheep and bullocks, or for killing any other creatures, except—our *fellow-creatures*? No, no! Were a man to discover the means of utterly extirpating the tobacco fly, or the Hessian fly, or the sheep rot, or the potato rot, not a man could be found so poor as to "do him reverence"! Congress—the Representatives of Farmers—would let him rot in jail. Yes! the very men who would vote, without scruple, \$100,000 for a military survey; or to send officers, year after year, to examine and study in the military schools of the military despots of Europe! And to all this farmers make no objection, raise no outcry. Even agricultural committees of the States, where they exist, are most of them too lazy or too timid to probe such barefaced perversions of legislative power! and the whole press of the country looks in silent acquiescence on such reprehensible disregard of all the legitimate ends of good Government.

Well, to return to the Alpacas. Seeing as we think we have seen the abortive attempts at propagating the Alpaca in Europe, and their prompt appreciation and *appropriation* of whole islands of guano, we reluctantly conclude that the abortion in the former case did not proceed from any deficiency in the attempt, and that, as in this country, it is only in a climate the most similar to England that we could expect the experiment to be well and adequately conducted, there is little encouragement to believe that the Alpaca will be successfully introduced and propagated in the United States. And here it occurs to us to say, that as some of the inquiries that have been made of us may have been prompted by the fact that our name was placed on a Committee to import some from Peru, it is not to be inferred that anything we have said is the result of inquiries or information obtained in *that connection*! Not at all. In the fitness of the members of that Committee, in all respects, for any scientific or useful undertaking they would enter upon, we have unbounded confidence; but we do not know exactly what has been done or what is in contemplation. We have not formally withdrawn, as we might have done, for want of time to attend, because we would not in any way seem to discourage the proposition by the withdrawal even of the little, very little, influence it could borrow from our name; but for the reasons here assigned, and others that might be given, as we should, if we had time, with more deliberation, we are far from being hopeful of any attempt to add the Alpaca to the wool-bearing animals of this country. We shall sincerely rejoice to find ourselves in error.

In the last account we have seen of the English "WOOL TRADE OF 1846," we find the following under the head of "PERUVIAN AND ALPACCA:" "Here we notice a very large increase. Sheep's wool, with the exception of best qualities, has been difficult of sale, even at receding rates. Since our last monthly Circular, the market has been nearly cleared of this description, principally taken on speculation. For *Alpaca*, up to May, the demand was very languid. During that month there was a large business done, induced by low quotations. The inquiry again fell off until within the last few weeks, since which time the sales have been extensive at advancing prices. The Customs' Report does not keep *Alpaca* distinct from sheep's wool; we can therefore merely guess at the quan-

ity which we believe to have been a full average import. The high prices current on the other side have led to shipments of very inferior quality, which we expect to continue till the completion of the contracts entered into at high rates. It is reported that supplies will be very much diminished this year, in consequence of the extensive drouth, which has caused great mortality in the Alpaca and Llama flocks." Of WOOL FROM THE UNITED STATES, the same Circular, of Hughes & Ronald, of Liverpool, says:

UNITED STATES.—This article promises at no distant date to become of first-rate importance. The present growth is much greater than we in this country have generally an idea of, being upward of sixty millions of pounds weight at the lowest estimate, far exceeding their domestic requirements. It is important to notice the great weight of the fleece, which is nearly double that of any other country producing similar qualities; and when we consider the facilities for extending the production, there cannot be a doubt that, in a short time, the quantity available for export will be very considerable. Moreover it appears, that of late much attention has been directed to the subject in the Western States, with this view, as offering, to some extent, a more profitable return than the cultivation of cotton; and when it is

stated that one pound of wool, nearly full blood, can be grown at the same cost as two pounds of cotton worth 6d., there is every reason to expect that the trade will eventually prove remunerating. The receipts last year were below the previous one, the consequence of former shipments generally not having been attended with advantage; but this is accounted for, to some extent, by the indirect channels through which many of the lots came, and their inferior condition in most cases. Until they are got up with more care, better washed, and more evenly graded, we see little prospect of a profitable result. The greater part hitherto received has been so deficient in these essential requisites that purchases have been attended with extreme hazard to the buyer, which has operated much against their sale.

We have had, as will be seen, for many months on file, the following from a gentleman who has resided in Peru, and with habits and every capacity for useful observation. His description of the Peruvian sheep, as far as it goes, corresponds in the main with Mr. Robinson's.

J. S. SKINNER, Esq.

NEW-YORK, 18th May, 1846.

Dear Sir : In answering your esteemed favor of the 7th instant, I beg to say that what I now write will be from casual observation, not having given the subject any attention during my long stay in Peru, with a view of communicating information to others.

The "Alpaca" is indigenous to Peru, generally 4½ to 5 feet high, neck 2 feet long; they carry themselves, particularly the neck, very erect, so that their head is from 5½ to 6 feet from the ground; they move majestically, limbs very clean. They are used among the flocks of Llamas as beasts of burden, and are much esteemed, being sure-footed; and in droves never run one load against another, as mules and horses are apt to do, thereby frequently destroying their cargoes if of a frail nature. Alpacas carry from 75 to 100 pounds, and, when overloaded, lie down and will not rise until lightened; are very docile and fond of being caressed, and make fine pets. Color generally light brown or dark nankeen, though I have seen many black, and some beautifully white. The Alpaca is not considered so noble as the Llama, and, I suppose, it is owing to the wool of the Alpaca being much longer (say 8 to 12 inches), which injures their appearance. They eat anything and little, and will live when many other animals would die; are tough and hardy. Formerly you could buy them for \$1; but they are now worth from \$4 to \$6 in the interior, and would cost about \$25 on board ship.

As food, they are not much esteemed.

The value of their wool has been much increased, in consequence of the large demand for England, and most or all the wool has been contracted for, for some years to come. When last in Peru (1845), I wished to purchase some Alpaca wool, but could get none at Taena, from which the most is exported. A friend then gave me an order for 10,000 lbs., to be received at Islay; but as we only stopped there one night, I could not take it, as it would have detained me 3 or 4 days for the necessary orders at the Custom-House.

I have ordered twelve Alpacas, and if they are procured in time, shall receive them in October [last], per ship "Orpheus," which I expect here

about that time. Sometimes they die on the passage. Of 297 shipped on owners' account to England—1 male to 9 females, 2 years old—only 3 arrived. The vessel was loaded with guano in the lower hold. Frequently 12 or 15 have been shipped, and only one or two die; the risk of bringing is great, on account of distance; at least 12 or 14,000 miles must be sailed over.

"*Quinua*" is a small grain much used in Peru, produced in the highlands of the interior; is sowed like wheat, and gives a large crop. It is cooked by boiling with potatoes and meat, or alone, like rice; but the natives generally cook it with a small piece of meat, cheese, or other substance, to give a flavor. It also makes a delicious sweetmeat and pudding, and is much used as a diet. The Emperor of Russia ordered it sowed largely in his dominions; with what result I know not.

At the request of a friend, when I visited Peru in 1844, I sent to the valley of Jauja for a bag of *Quinua*, which I brought with me to the United States, and sent a part of it to the Commissioner of Patents, and a part to the person who requested me to obtain it; and he has since informed me that he had sown some, but that it did not grow. I supposed that it must have been kiln-dried, or injured on the voyage. I have no doubt that it would be much liked if it could be produced here, and I see no reason why it cannot.

Arracacha is unknown to me by that name.

So far as my observation goes, *Merino*, or part-blooded sheep (as they keep in the best order) are superior for *sea-stock* to other classes of sheep.

The "Vicuna" I have frequently seen when crossing the Andes, or on the *Punas* (highlands), which I have crossed fourteen times; and it is a fact, as I have been told, that if you can encircle them with a red yarn two feet above the ground, that none will leave the circle; and by shooting one of a flock, you can take all but two or three, as they all congregate about the dead one until only a few remain, when they run off.

Respectfully, your most ob'dt,

SAM. F. TRACY.

SHEEP AND WOOL—NUMBER AND VALUE IN THE UNITED STATES IN 1840.

THE quantity of Wool sheared in the United States in the year 1839, according to the census of 1840, and the estimated value by Professor Tucker at that time, as the result of his inquiries on the subject, are as follows:

States.	Pounds.	Value.	States.	Pounds.	Value.
Maine.....	1,465,551	\$492,942	Alabama.....	220,353	66,206
New-Hampshire.....	1,260,517	441,181	Florida.....	7,285	2,185
Massachusetts.....	941,906	329,677	Louisiana.....	49,283	16,428
Rhode Island.....	183,830	65,340	Mississippi.....	175,192	52,559
Connecticut.....	889,870	311,434	Arkansas.....	64,943	20,483
Vermont.....	3,699,235	1,284,232	Tennessee.....	1,060,332	265,583
Total New-England States.	8,440,909	\$2,924,806	Missouri.....	562,265	140,564
New-York.....	9,845,295	3,445,853	Kentucky.....	1,786,847	446,712
New-Jersey.....	397,207	139,022	Ohio.....	3,685,315	921,329
Pennsylvania.....	3,048,564	1,066,997	Indiana.....	1,237,919	309,473
Delaware.....	64,404	22,541	Illinois.....	650,007	162,500
Maryland.....	488,201	170,870	Michigan.....	153,375	38,344
Virginia.....	2,538,374	761,512	Wisconsin.....	6,777	2,259
North Carolina.....	625,044	156,261	Iowa.....	23,039	7,679
South Carolina.....	299,070	89,721	District of Columbia.....	707	212
Georgia.....	371,303	111,391	Total.....	35,802,114	\$11,341,390

The average value, by this statement, is about 33 cents per pound.

Since the census of 1840 was taken, an immense increase in the number of sheep, in the Western States particularly, has taken place.

The total number of sheep in the United States, when the census was taken in 1840, was 19,311,374. Of course the average weight of their fleeces cannot be ascertained, as the number of lambs is not given in the census; but, making a liberal allowance for the lambs, it would appear that the average weight of fleeces did not exceed three pounds each.

INFALLIBLE EGG-COUNTING MACHINE.

THE counting of eggs, in large quantities, by the ordinary method is an operation always attended by much loss of time, liability to mistake, and risk of breakage. The machine described below may be made in a day or two, by any one possessed of mechanical skill sufficient to handle a saw and hammer, unless neatness of finish is desired. Let a frame of wood-work be made precisely similar to a chest of drawers. The drawers should be one inch deep (or sufficiently deep to admit of one layer of eggs), and the bottoms formed of thick plank.

Previous to putting together, hollow places should be dug in this plank, in rows, at regular distances. They should be one-quarter of an inch deep, and of the size and shape requisite to allow an egg to be laid in each one. A square yard will contain more than five hundred of these hollow places. They should be painted black, and the remainder of the board white. When filled with eggs, the board will present an entirely white surface; should one or more eggs be lacking, the black spots will immediately be apparent to the most casual observer. Black lines should divide the hundreds, and tens; and, when full, the drawer may be shoved back into its place, until the contents are wanted for market. Any number of drawers may be made, of any convenient size and shape.

It will be conceded that it is as easy to deposit the eggs in these drawers as in any other proper place; and, when once in, they are ready counted to hand, without the possibility of a mistake. Besides this, the perfect safe-keeping of the eggs is secured, as no rats or other depredators can obtain access to them, and they will not be broken by shaking or handling. A machine to count 2,000 eggs at a time will cost \$1 for stuff, and \$2 for making, and will last till the general conflagration.

S. H. M.

COMMERCE IN EGGS.

IN the whole cycle of commercial statistics, we have not lately met with anything more remarkable than the account we find in the "JOURNAL D'AGRICULTURE PRATIQUE ET DE JARDINAGE," on the *Egg Trade* of France. The Editor says that it appears by official returns that in 1815 the number of eggs exported was not more than to the amount of 1,000,700 francs. In 1816, 8,800,000 francs; in 1822, 55,000,000; in 1824, to 99,500,000! The trade was then arrested, and experienced a retrograde movement. The exportation fell to 55,000,000 in 1830, but in 1834 it rose again to 76,800,000, and in 1844 it mounted up to 88,200,000. This mass of eggs weighed, at the rate of sixteen to a kilogramme, 5,213,000 kilogrammes; upon which the Treasury realized 114,000 francs (about \$25,000) export duty on eggs! England takes almost the whole of the eggs exported from France. Of the 88,000,000 above mentioned, 82,500,000 have crossed the Channel.

According to the official estimates, the consumption of eggs in Paris is 138 for each individual, which is very nearly 120,000,000 a year. We may double this estimate for the rest of France, without exaggeration; for, in the country, eggs and milk are aliments to be found on every table. We eat, instead of eggs and milk, vast quantities of *solid fat meat*—Americans having, as was expressively said by the Abbé CORNEA, "*bacon-stomachs*"!

The consumption, then, of eggs, in all France, may be safely put down at nine billion, three hundred million. If we add to this total that of the eggs exported, and one-hundredth in addition of these two numbers for the eggs reserved for reproduction, one will find France has produced *nine billion and a half*; and, valuing each egg at the rate of the tenth of a cent, we have the enormous sum of 465,000,000 of francs, or near \$100,000,000. Though this estimate may overrun the production in some of the Departments, it is nevertheless certain that the value which represents the annual production of eggs is to be counted by *millions of francs*, and to most people must be a matter of surprise.

Speculating as to the cause of this wonderful productiveness of poultry in *France*, over any other country, one is led to attribute it to the same reason which has so much diminished her produce in animals and animal food—namely, the division of estates, *carried to an extreme* highly prejudicial to general Agriculture. The land laws of that country compel an equal division of estates among the children or relatives in a certain degree, without power in a proprietor to sell more than one share. Under the operation of these laws, it appears that in 1830 the 120,000,000 of productive acres in France had been divided into 123,000,000 lots or *parcilles*. It is farther shown by official returns that there are 5,163,000 proprietors, whose average holdings are under five acres. These establishments are altogether too small to allow of the proprietors' keeping horses, and cattle, and hogs, and sheep; and hence the *great number of poultry and of eggs!*

FATTENING POULTRY.

THE same French periodical—JOURNAL OF PRACTICAL AGRICULTURE AND GARDENING—gives the following account, on the experience of those engaged in the poultry business, as the means pursued where fowls are found most remarkable for the delicacy of their flesh. The whole secret, say these people, consists in giving *oats* at discretion to chickens, turkeys and geese, and keeping them in darkness. The rationale of the process is said to consist in this: No substance will fatten fowls like oats—perhaps they have had no trial of Indian corn, which frequently interposes to influence our estimate of European calculations as to the aliments best adapted to feeding and fattening. Be that as it may, we proceed with the rest of the statement, which is as applicable to corn as to oats. It is affirmed that potatoes produce scarcely any fat. If, say they, we keep an animal in the dark and in a narrow space—that is, the less exercise is allowed to a fowl—the more it will take on fat. We observe the same thing with the negro's hog: Confined in a small pen, where he has scarcely room to turn round, how fast he outgrows his master's of the same litter. True, he may be often fed in the *dark*, as well as in the day time. Thus shut up in a dark place, says the Frenchman, the fowl concludes it one eternal night, and so keeps always sleeping; whatever most paralyzes its movements promotes fatness; it wakes only to eat, which it does in the night as well as day. If it sees the light it becomes agitated; but, the light excluded, it remains quiet and without motion.

Doubtless this practice of taking measures to insure darkness, and immobility, and perfect exemption from all agitation, might be well applied in the fattening of all animals, with great economy both of time and provisions.

MORE OF THAT FARMER WHO MILKS HIS OWN COWS.

In the January number of the Journal of Agriculture, we gave a running sketch of a "Breakfast-table Conversation" with a practical farmer, near Lebanon Springs, N. Y., who, when we made him a visit last summer, prompted by the common report of his good management, was just about to take his station on the right flank of a "full-uddered" cow, that stood patiently chewing the cud, waiting her turn to be relieved of her milky treasures. The short notes of his management made at the time having become almost illegible, we wrote for some explanation on particular points, and now, for certain considerations, we have concluded that the publication of his letter, just as it was written, may not be without its usefulness, and will best conduce to the end we have in view, which is, to make the South and the North, the East and the West, better acquainted with each other's habits, character and products respectively. We give the answer of Mr. Hall then, precisely as it was written, without alteration of word or letter. It will show that it by no means follows that those who every day follow the plow, cannot also use the pen well enough for the best use that can be made of it—that is, to make one's self *clearly and plainly understood*. We even venture to ask whether it would not be safer to take such men as he, who are bound by an abiding sympathy to the landed interest, from draining and plowing their fields, to frame our laws and take charge of our public affairs, than to be governed by all the pettifoggers, and mere party demagogues, this side of Passamaquoddy!

Mr. SKINNER:

NEW-LEBANON, Dec. 15, 1847.

Dear Sir: Yours of the 13th was duly received, as was also the December number of THE FARMERS' LIBRARY, for which please accept my thanks.

Please allow me, Sir, to ask you to correct one mistake into which one of us has inadvertently fallen: that is, by the addition of one too many cyphers (0) to the number of pigs I sold.

I hasten to answer your inquiries in a desultory manner, hoping they will be intelligible and interesting, but would remark that I am altogether more accustomed to plowing and feeding pigs than I am to writing.

My apparatus for cooking feed is simply a steamer made of plank 7 feet long by $2\frac{1}{2}$ wide and 2 feet 4 inches deep, with a Russia sheet-iron bottom, (copper would be better,) nailed on to the plank, with a *false* bottom of boards (filled with small holes) 4 inches above the iron one. A cover completes the steamer. The whole is placed upon a brick area so constructed that the plank or sides and ends reach on to the brick work $4\frac{1}{2}$ or 5 inches, which protects it from the fire. The space between the two bottoms is filled with water, and that above with the vegetables. The vats to contain the food when prepared for feeding run on rails the length of the piggery, and pass near the steamer, for the convenience of removing the food after it is cooked.

The method of making butter we practice is as follows: Room used, kept as near a temperature of 60° as may be; milk strained into a large can, placed in the milking-yard, which adjoins the milk-room, inside of which it is drawn by means of a conductor and faucet into tin pans, usually about 8 quarts in each pan; it is drawn over and placed in the can whenever the temperature requires it; consequently the cream rises in much less time than when cooled in the ordinary way; it ought to stand 36 hours before being skimmed, but this time must be varied according as the weather changes; it should be skimmed when it is slightly changed, and before it is coagulated. The cream is put into stone jars and placed in a refrigerator in contact with ice until it is churned, which is done every two or three days, in a circular churn with revolving arms or paddles framed into a shaft of wood (cream should never come in contact with iron). The motive power is a platform wheel turned by a pony. The butter is salted with ground rock-salt passed through a fine sieve, that there may be no lumps

or particles that will not dissolve. It is salted to suit the taste, which should be adapted to the market for which it is intended; it is then placed in the refrigerator and kept cool until it is taken out, worked on an inclined table, packed in new tubs containing 25 lbs. each, and sent to market, which is done every week, always using ice in every situation required.

You will be best able to judge of the value of the offal, milk and *buttermilk* for hog feed, when I state that I have sold pigs, pork and lard to the amount of \$1,063 09, at an expense of \$767 for purchase money of pigs and feed other than milk; and that my hogs have made, of the feed and materials given them, near three hundred half-cord loads of manure, the value of which every farmer ought to know. I make about 200 loads from my teams and cows, which I suppose to be about one-third less in value than the manure made from hogs.

I hire two men through the year, say \$130 each, and one for eight months, \$90; consume about 2,000 lbs. of meat per year in a family of 10 persons.

The calves I send to market (except those for my own cows) are bought in the neighborhood, at 4 or 5 weeks of age, and usually sell at 4½ to 5 cents per lb. for carcass, and 9 cents for skin. Expenses on each one about \$1.

The eight pigs you allude to were killed very early in the season (first week in November). They weighed 270 lbs. average. Killed 59 hogs, average weight 290 lbs.; average price 5 48½-100 cents per lb.

I have tried an experiment in the construction of blind ditches, or under-drains, since I saw you, which resulted satisfactorily. In a field of 9 acres, very level, and lying at the base of a hill, I have been very much troubled (whenever I have plowed it) with surface water, which has some seasons destroyed the crop. I suppose the difficulty lay in a very tenacious subsoil, which retained the water (that ran from the hill) near the surface. I staked out a line for a ditch 30 rods long, took one pair of horses, a common plow, (a subsoil-plow would be much better after the first furrows,) and four men, and commenced; turned up the sward the first two furrows, and removed it a little one side; then went down with the plow, so guiding it as to produce the required slant or slope to the sides of the ditch, and at every furrow throwing out the dirt. The moment that we had penetrated far enough into the subsoil to drain the adjoining surface, the quantity of water that rushed out was perfectly astonishing, and satisfied me that my plan was a correct one. Give me 4 good horses, with proper tools and men, and I can dig any quantity of drains 2½ feet deep for 12½ cents per rod.

I think you will be weary after perusing a rambling epistle of such length.

Respectfully your friend,

B. F. HALL.

GREAT DESTRUCTION OF NOXIOUS ANIMALS—BIRDS AND BEASTS.—Could any one suppose that in an old country, as France, in the last six years, in the forests of the Crown alone, there have been destroyed by guns and traps, noxious animals—birds and beasts—as thus: wolves 53; she-wolves 22; young wolves 13; foxes 5,421; badgers 213; pole-cats 3,659; American pole-cats 3,050; dogs 1,597; cats 7,784; weasels and hedge-hogs 34,452; buzzards 4,478; hawks 7,451; *cats-huants* 10,170; crows 18,466; magpies 21,450; jack-daws 19,479; squirrels 6,030; rats and mice 10,822—total 154,517. So it is stated in the Journal of Agriculture.

TO DISINFECT DAIRY VESSELS OF ALL NOXIOUS ODORS—A valuable Recipe in a few words.—Every dairy should have a vessel of lime-water setting in it, say half-gallon of lime to ten or twelve gallons of water, simply to rinse everything in. The vessel can be filled up as often as you please. It will be sure to remove all acidity or bad odor. Let dairywomen remember this.

EXCREMENTS.—In Flanders the collected excrements of a man for one year are valued at £1 17s. A pound of urine contains all the ingredients necessary for the production of a pound of wheat.

(936)

MAIZE, OR INDIAN CORN.

THE demand for this valuable American grain, which has sprung up in Europe, principally in consequence of the failure of the potato crop in Ireland and other European countries, promises to be of more than temporary interest to the farmers of the United States.

Although the present high prices for this grain in our Atlantic ports cannot be expected to be maintained in future years, yet we believe that the extended use of it in various parts of Europe will cause it always hereafter to be regarded with favor as a cheap food in quarters where it has been hitherto either unknown or considered with prejudice, as fit only for the food of cattle and swine. Taking all circumstances into view which are likely hereafter to influence prices, we are induced to think that, in years of plenty, an extensive demand for export will exist in our Atlantic ports—not at the present prices of 90 cts. to \$1 per bushel, but probably at remunerating prices to the farmer and those who transport the grain from the interior to the sea-board—say from 50 to 70 cts. per bushel.

We recollect a conversation which we once had with a southern planter on the Alabama River, in which he remarked that he would prefer raising Indian corn at 25 cts. per bushel (shelled), delivered on his plantation, to cotton (ginned and cleaned) at 9 cts. per pound.

According to the estimates of Professor Tucker, of Virginia (now of Philadelphia), of the value of maize raised in each State of the Union, by the census of 1840, and the result of his own inquiries—which we published in a Table in THE FARMERS' LIBRARY, vol. i., page 591—it appears that the average value per bushel for the United States at that time (when there was no extraordinary foreign demand) was about 35 cts. We have no doubt the average value of the crop of last year would be found to be at least 60 cts. for the whole United States. This price, supposing the crop to have been 400 millions of bushels, would produce an amount of *two hundred and forty millions of dollars*. It must be recollected, however, that the farmers require a large proportion of the corn raised by them for their own use; but, if we suppose that they dispose of one-quarter of the crop to non-producers in the United States, and for export to foreign countries, it would then appear that one hundred millions of bushels of last year's crop have been or will be disposed of by our farmers at an average price of 60 cts. per bushel, amounting to sixty millions of dollars, or twenty-five millions of dollars more than the same quantity would have brought in market in the year 1840.—This shows the immense advantages our farmers who have raised corn to sell have derived from the scarcity in Europe, although probably not more than fourteen or fifteen millions of bushels of last year's crop of maize have been or will be shipped to foreign countries.

The proportion of the crop of maize raised in 1839, in different sections of the United States, and the value thereof, according to Prof. Tucker's estimates, and the Table published by us last year, are as follows:

States.	Bushels.	Value.
New-England States.....	6,992,909	\$4,794,893
Middle States.....	39,946,213	23,356,515
Southern States.....	94,998,235	44,994,506
South-Western States.....	129,741,093	38,259,033
North-Western States.....	105,853,405	21,186,681
Total United States.....	377,531,875	\$132,591,628
(937)	Average about 35 cents per bushel.	

It is a singular fact that the value of Indian corn raised in the cotton-growing States, according to the above estimates, is greater than the value of cotton grown in the same States, as will be seen by the following:

States.	Bushels.	Indian Corn.	Value.	Cotton, Value.
North Carolina.....	23,893,763	\$9,477,505.....	\$3,633,863	
South Carolina	14,722,805	7,361,402.....	4,628,270	
Georgia	20,905,122	10,462,561.....	11,437,467	
Florida	898,974	404,243.....	726,632	
Alabama	20,947,004	8,378,801.....	8,209,717	
Louisiana	5,952,912	2,976,451.....	10,678,873	
Mississippi	13,161,237	5,264,494.....	15,472,126	
Tennessee	44,986,188	11,246,547.....	1,662,076	
Arkansas.....	4,846,632	2,423,316.....	361,718	
Total.....	150,314,637	\$57,995,320.....	\$56,810,744	

The total quantity of cotton raised in the above States in 1839 was 785,965,080 pounds; in Virginia and other States, 4,514,195 pounds. Total crop of the U. S. 790,479,275 pounds; valued at \$57,130,302—the average being a small fraction over seven cents per pound.

It remains to notice the exports of Indian corn and meal from the U. States to foreign countries. We will notice those of the last six years, viz.

Years.	Indian Corn, Bushels.	Indian Meal, Barrels.
1841.....	535,727.....	232,284
1842.....	600,308.....	209,199
1843 (9 mos.).....	672,608.....	174,354
1844.....	825,282.....	247,889
1845.....	840,184.....	209,030
Total.....	3,474,109.....	1,132,749
Average.....	694,882.....	256,549

For the year ending June 30, 1846, we have not the quantities exported, but the values are given as follows:

Indian corn	\$1,186,663
Indian meal.....	945,081
Total.....	\$2,131,744

At the average prices of last year, say between 50 and 60 cents per bushel, it appears that about four millions of bushels of corn and meal were exported, principally of the crop of 1845. This shows a great increase over the quantities exported in former years; and the export for the current year will probably be triple or quadruple that of the increased quantity of the year previous.

If the exports to foreign countries should amount to fourteen millions of bushels of Indian corn and meal, at an average price of 80 cents per bushel, the gain to the United States over the export of the same grain last year will be about nine millions of dollars.

Destiny of Indian Corn and Meal exported for the year ending June 30, 1845.

	Indian Corn, Bushels.	Indian Meal, Barrels.		Indian Corn, Bushels.	Indian Meal, Barrels.
British West Indies.....	339,871	152,172	Brazil.....	870	107
Swedish do.	3,630	2,996	Cisplatine Republic.....	490	
Danish do.	15,443	46,020	British Amer. Colonies.....	155,217	45,082
Dutch do.	5,840	4,969	England.....	134,898	1
French do.	17,654	925	Ireland.....	790	
Cuba.....	67,596	6,248	Gibraltar.....	1,788	
Other Spanish W. Indies..	610	4,995	Cape de Verde Islands.....	320	30
Hayti	1,435	402	Madeira.....	30,499	
West Indies generally.....	15,961	335	Africa.....	30	41
British Guiana	17,418	4,026	China.....		50
French Guiana.....	100		Sou. Seas & Pacific Ocean.....		41
Texas.....	5,217	6	Total.....	840,184	269,030
Mexico.....	1,260	40	Value.....	\$411,741	\$641,552
Venezuela.....	23,247	544			

It will be seen that the exports of corn and meal for the above year were principally to the British American Colonies and the West Indies.

Consumption of Vegetable Food in the United States.

Professor Tucker, in his work entitled "Progress of the United States," says that about fifteen-sixteenths of the grain and potatoes produced in the U. S. are consumed at home, either directly or in the form of animal food, and only one-sixteenth is sent abroad in either of these forms.

The quantity of vegetable food annually consumed in the United States by a family of five persons, after deducting one-sixteenth of the grain for the amount exported, and one-tenth for seed, is as follows:

Indian corn.....	85 bushels.	Wheat, rye, &c.	25 bushels.
Oats.....	28	Potatoes.....	25

To the articles annually consumed by a family are to be added poultry to the value of \$2 25; pickled fish, one-third of a barrel; rice, 12 lbs.; sugar, 42 lbs.; besides garden vegetables, products of the orchard, and game.

IMPORTANT TO FARMERS.—A letter from a highly respectable house in New-York to a commercial house in this city, says: "The preference is now altogether for yellow corn, though but a few months back white was preferred. Meal from white corn is now also difficult of sale."

Yellow corn, we understand, can be readily sold for 4 or 5 cents per bushel more than white in the New-York market. The farmers will perceive the importance, in planting their next crop, of having reference to a fact likely so seriously to affect their interests; for, even if the next European harvests should be abundant, it is not to be doubted that the demand for corn will continue to be large for twelve or eighteen months to come. Having become familiarized, indeed, to its use, we may anticipate that it will continue, even after the necessity in which its exportation originates shall have ceased to exist, to constitute no inconsiderable portion of the food of the people of Great Britain.

[Richmond Whig.]

ENCOURAGING SIGNS FOR THE CAUSE OF AGRICULTURE.—There are no letters we peruse with more pleasure than such as the following. They show that the public sentiment is taking the right direction, and that we are steadily, even though it be slowly, approaching a great reform in our systems of education—one under which the youth of the country will cease to be instructed in anything and everything but in those very branches of knowledge by which they may gain, with more ease and certainty, that condition of competence and comfort which probity and diligence ought to insure to every citizen of the Republic. What we want—the great want for almost every State—as we have repeatedly urged, is a NORMAL SCHOOL, at its Seat of Government or elsewhere, in which *teachers* should be taught and prepared for the great, the noble office of *instructors of youth*.

We are truly gratified to see how wisely and feelingly this subject has been dwelt upon by Gov. BRIGGS, in his Address to the Massachusetts Legislature; and will copy that part of it in our next.

We shall never forget the delightful sensations experienced in witnessing the exercises of such a school at Albany, to which we were taken by an enlightened citizen who has since done to Fairfax, Virginia, the favor to take up his abode there.

We will not so far reflect on the judgment of any reader as to suppose that he does not at once see the connection between enlightenment of the mind of the masses, and security of property, and the general prosperity and safety of the country.

JOHN S. SKINNER, Esq.

BALTIMORE, January 12, 1847.

Dear Sir: I am desirous to find a situation in *every* respect suitable for a son of mine, 20 years old, to learn farming, horticulture, &c. Presuming you are able to inform me, I take the liberty of requesting you, if you know a situation of the above kind, that you will inform me. I would merely add that my son is a *very* moral young man, and is desirous of learning the business of a farmer. An answer, at your earliest convenience, will oblige
Your obedient servant.

TO DESTROY WEEVILS.—Apply with a brush to the walls and floor of the granary, strong lime-water, and in a few days afterward wash the floor with soap and warm water.

LETTER V.

PROFITS OF SHEEP HUSBANDRY IN THE SOUTHERN STATES.—I. DIRECT PROFIT ON CAPITAL INVESTED.

Different points of view in which the question of the profitableness of Sheep Husbandry in the Southern States is to be regarded... Direct profit on Capital invested first considered... Average prices of Wool in New-York... Average weight of fleece—Price of Sheep—Increase in Lambs—Amount of Manure... Price of Land... Number of Sheep supported per acre... Estimate of the Expenses and Profits of 100 Sheep, taking average prices of Wool for the last fourteen years... Present low prices of Sheep—Causes—Estimate of Profits of 100 Sheep, at present prices of Sheep and Wool... Profits far below what they might be by breeding better Sheep... Writer's Flock—Annual yield of Wool—Prices sold at for six years—Statistics of Premium Flock... Show that Wool can be produced at a large profit in New-York at present prices... Healthfulness and economy of substituting Mutton for a portion of the Bacon consumed in the Southern States... Economical advantages which Sheep possess over other animals—No risk by Death—Manure more valuable—Best clearers of Briery Lands—Improvers of Vegetation... The cost of producing Wool in the South, compared with the cost in New-York... Number of Sheep which can be supported per acre South—Greater number than on land of the same quality North, by reason of the winter growth of grains and grasses in the former... Col. Allston's statement—R. L. Allen's—Col. Hampton's—Hon. R. F. Simpson's in relation to the Atlantic States south of Virginia... Price of Lands in those States... Winter Vegetation in Tennessee, Kentucky and Virginia... Mr. Coles's statement—John S. Skinner's... Recapitulation... Estimate of Profits on 100 Sheep South—Compared with New-York... Profits on the Southern Mountains... Doct. Brockenboro's statements—Mr. Murdock's... Economy of Migratory Sheep Husbandry... Advantages for it in the South compared with those of Spain... Drawbacks on Profits of Sheep Husbandry—Dogs and Wolves... Their depredations compared with those in Australia and the Cape of Good Hope... Remedy.

Dear Sir: In ascertaining the Profits of Sheep Husbandry in the Southern States, several considerations present themselves, apart from the mere question of direct annual profit or loss on a given investment in Sheep and in land for their subsistence. The more immediate and obvious profit is doubtless the first question; but in regarding the general advantages or disadvantages of this branch of husbandry—particularly in a region circumstanced in all particulars as the Southern States are—we are farther to consider the practicability and comparative economy of making it the basis of an effectual amelioration in soils naturally sterile, or those which have been rendered so by excessive and injudicious cultivation; and its comparative efficacy in giving to Southern Agriculture a mixed and convertible character, and thereby sustaining (or improving) all the present good tillage lands, in the place of continuing the “new and old field” system—(tilling land until it is worn out, then abandoning it and opening new lands,)—once so general, and even now by far too prevalent. And there is another point of no mean importance: whether, independent of preceding considerations, and even if the staples furnished by sheep husbandry proved no more profitable, in direct returns on capital invested, than some of the present staples, it would not be better economy, on the whole, for the South to produce the raw material and manufacture domestic woolens, particularly for the apparel and bedding of slaves, than to be dependent for them on England or Massachusetts.

To ascertain the direct and immediate profit on investment in sheep husbandry, let us appeal to well settled facts and statistics, instead of contenting ourselves with vague and general propositions. For the following Table of the average prices of good wool* in the State of New-York, which was published in my replies to Mr. Walker's “Treasury Circular” in

* Such wools as are used for the manufacture of broad and other cloths of good quality—ranging, say, from $\frac{1}{4}$ th blood Merino to pure Saxon—excluding native, grade (below $\frac{1}{4}$ th Merino), and all English wools. (940)

1845,* I was indebted to a most respectable and extensive purchaser of wool, and its accuracy is beyond question.

TABLE No. 7.

Year.	Average price per pound.	Year.	Average price per pound.
1832.	.40 cents.	1839.	.50 cents.
1833.	.50 do.	1840.	.33 do.
1834.	.45 do.	1841.	.35 do.
1835.	.48 do.	1842.	.30 do.
1836.	.54 do.	1843.	.31 do.
1837.	.30 do.	1844.	.40 do.
1838.	.36 do.	1845.	.32 do.

It will thus be seen that for a period of fourteen years preceding 1845, the average price of good wools was $39\frac{1}{2}$ cents per pound.[†]

The average weight of fleece in sheep yielding this wool has been about 3 lbs.; the pure-blood Saxons less; but those bearing the coarsest wool included, in the average, more.

The average price of sheep of the quality under consideration, has been not less than \$2 per head in the fall, and lambs half that price.[‡] The annual increase in lambs would be about 80 per cent., or if less by reason of the number of wethers in the flock, the *growth* of the latter would give a corresponding increase in profit. One hundred sheep, properly littered, will make at least forty loads of manure during the one hundred and fifty days during which they are confined to dry feed, in our Northern winters.

The grazing lands of New-York, cut up as they are into small farms,^{||} and each being provided with dwelling and farm buildings, are worth from \$15 to \$30 per acre. Prime sheep lands will average about \$20.[§]

In relation to the amount of land necessary to support a given number of sheep, the experience of a good many years has satisfied me that the rule commonly laid down on the grazing lands of New-York and New-England, that, on the average, one acre of land will give subsistence to three fine-wooled sheep throughout the year, is an accurate one.[¶] On grain farms, it is considered good economy to keep one sheep for every acre of cleared land which the farm contains; on those where mixed husbandry is practiced, two; and, on those exclusively devoted to sheep, three.

In the following, and all similar estimates, I shall reckon the profits on the *land and expenditures*, instead of the *land* and the *commonly quoted prices* of grass, hay, &c., consumed. These prices, in the interior, are

* See Report of the Secretary of the Treasury, 1845, p. 461. I thought, and so stated to Mr. Walker, that the Table placed wools about $1\frac{1}{2}$ cents per pound too high. But subsequent information has convinced me that I was in error. In my statement of the *average* profits of sheep husbandry, in those replies, I estimated the average price of wool by the prices paid by a local and much smaller purchaser, and for a comparatively limited term of years. I was not then aware of the utter defectiveness of the U. S. Census returns (pointed out in Letter II.) in relation to the annual product of wool, and therefore was misled in the average weight of fleeces; and, speaking from impression rather than experiment, I placed the value of the manure altogether too low. Those questions and replies have led me into experiments and inquiries, which have resulted in more accurate information. I allude to this subject, because I think it every man's duty to correct any errors or explain any discrepancies subsequently discovered by him, in his statements which have been thrown before the public, and thus are placed in a position to mislead.

† During 1846 it was from 30 to 32 cents per pound, but as this estimate is not based on extensive purchases, like the preceding, I have not placed it in the table.

‡ Including *grade* sheep, which form the greatest proportion of the whole number. There have been very few pure-blood Merinos in the State, and many of the Saxon flocks have been so miserably deteriorated in carcass and weight of fleece, that they have sold for low prices. But *good* Saxons sold much above this until within three or four years; since then, the Merinos have been rapidly driving out the Saxons, and those of good quality and undoubted pedigree have sold for from five to twenty-five times as much. The higher the price, the greater the profits, by reason of the value of the increase.

|| It would be my impression that the farms in the grazing regions do not, on the average, exceed 130 acres each.

§ Id est, in the grazing region.

¶ I say "fine-wooled sheep," because the larger and coarser Downs, Leicesters, Cotswolds, &c. consume much more, as will hereafter be shown.

merely nominal, as they cannot be obtained for beyond a small portion of the annual crop. They do not, therefore, form a proper basis for correct general estimates.

The expenses and losses in keeping sheep, not already alluded to, are all set down below, as high as they will average on well managed farms.

<i>Dr.</i>	<i>\$ cts.</i>	<i>Cr.</i>	<i>\$ cts.</i>
100 Sheep to interest on purchase money.....	14 00	By 300 lbs. of Wool, at 39 4-7 cts. per lb.....	118 71 3-7
To int. on 33½ acres of land at \$20 per acre.....	46 66	" 80 lambs at \$1 per head.....	80 00
" curing and storing hay on 11 acres of above.....	13 75	" 40 2-horse loads of winter manure at 50 cents per load.....	20 00
" expense of shearing.....	4 00	" summer manure, calling it only equal to shearing and summer care*.....	8 00
" salt, tar and summer care.....	4 00	Total.....	\$226 71 3-7
" labor of foddering, &c., during winter, say.....	5 00	Balance.....	\$135 30 3-7
" loss by death 2 per cent. above the value of pulled wool.....	4 00		
Total.....	\$91 41		

Making the net profit of \$4 05, or 20½ per cent. per acre on lands worth \$20.

Since the passage of the Tariff of 1846, there has evidently been a panic among the wool-growers of New-York, and the rise in bread-stuffs, beef, pork, and dairy products, occasioned by the change in the British Tariff, and the famine which has prevailed in Europe by reason of the short crops of 1846, has tended farther to depreciate sheep, by offering inducements supposed to be very strong, to embark in branches of husbandry furnishing the former staples.† Sheep are consequently cheaper than they ever were before. Prime grade sheep, bearing wool of as good quality as the average of that embraced in Table 7, have in some instances sold for ten shillings per head, and coarse common sheep for one dollar—lambs half a dollar—making, in the ordinary proportion between lambs and grown sheep, about 75 cents per head, taking a flock through!

Wool of the quality embraced in Table 7 has fallen to an average of say 31 cents. Under the impression that sheep and wool have reached their minimum prices,‡ it becomes an interesting subject of inquiry whether they can yet be produced, at a profit, in New-York. The following figures I think, will fairly show :

<i>Dr.</i>	<i>\$ cts.</i>	<i>Cr.</i>	<i>\$ cts.</i>
100 Sheep, to interest on purchase money, at \$1 25 per head.....	8 75	By 300 lbs. of Wool, at 31 cents per pound.....	93 00
To int. on 33½ acres of land at \$20 per acre.....	46 66	" 80 lambs, at 62½ cents per head.....	50 00
" cutting, curing and storing hay on 11 acres of above.....	13 75	" 40 2-horse loads of winter manure, at 50 cents per load.....	20 00
" expense of shearing.....	4 00	" summer manure, calling it only equal to shearing and summer care.....	8 00
" tar, salt and summer care.....	4 00	Total.....	\$171 00
" labor of foddering, &c. during winter, say.....	5 00	Balance.....	\$86 34
" loss by death 2 per cent. above the value of pulled wool.....	2 50		
Total.....	\$84 66		

Making \$2 59, or nearly 13 per cent. *net* profit per acre on lands worth \$20.

In the preceding estimates I have only regarded the profit of sheep husbandry, as it has averaged for a series of years, among those possessing *good ordinary flocks*.

* I place the summer manure, undoubtedly, considerably below its actual value. No experienced farmer will say that good solid sheep manure is worth less than 50 cents per load, and as the summer manure is at least equal in quantity, and is deposited immediately on the land, I see no reason why it is not equally valuable.

† That the diminution of English duties on these staples will give them a better and steadier market, there can be little doubt; but not the *very high* one of the past season, occasioned by the severe famine which has prevailed in many parts of Great Britain. Many, therefore, who have sacrificed their sheep, reckoning on such prices, will probably find that they have "reckoned without their host."

‡ I say this under the decided impression that our wools, at this price, *if properly washed and put up*, would triumphantly compete in the foreign markets with those of the wool-growing nations of Europe; and even with those of Australia, the Cape of Good Hope, and other Austro-oriental regions. For a more full examination of this point, see Appendix D.

It falls far short of that realized by breeders and flock-masters, who started their flocks with the best pure-blood sheep then to be found in the country ; and who have subsequently continued to improve them by great care in breeding, and by a rigorous course of selection.

I have bred Merino sheep for a number of years, and latterly in considerable numbers ; and in no case have my grown sheep averaged less than 5 lbs. of well washed wool per annum. The quality of the wool may be inferred from a comparison of the prices at which it has sold, with those in Table 7. In 1846, I sold for 35 cents per pound ; in 1845, for $33\frac{1}{3}$ cents ; in 1844, for 48 cents ; in 1843, for $33\frac{1}{3}$ cents ; in 1842, for 35 cents, and so on.

To give more precise data, I select the following statement of the products of a flock, on which I drew the first premium offered by the New-York State Agricultural Society for "the best managed flock of sheep," in 1844 :

[From the Transactions of the N. Y. State Agricultural Society, 1844, p. 254.]

"In the winter of 1843-4, I wintered in a separate flock fifty-one ewes over one year old, two ewe lambs, two rams, one of them one and one of them two years old. Of the ewes over one year old, twenty-eight were full-blood Merinos ; twenty-three were half-blood Merinos and half-blood South-Downs ; the two ewe lambs were three-fourth-blood Merino and one-fourth-blood South-Down ; and the two rams were full-blood Merinos. The flock were kept as follows through the winter : They were fed hay morning and night, and were, as a general rule, required to eat it up clean. At noon the flock were daily fed three bundles of oats and barley (which had grown mixed, say three parts oats and one part barley,) until the 25th of December—after which they received four bundles of oats. The grain was light and shrunken. They received no hay at noon during the winter, and usually consumed all the straw of the grain fed them. They had a good shelter, and access to pure water at all times. From this flock I raised fifty-three lambs. The full-blood Merinos, including two rams, and the two three-fourth-blood lambs, (in all thirty-two,) sheared one hundred and eighty-six pounds and four ounces of washed wool, which I sold at forty-eight cents per pound. Four of the full-bloods had two years' fleeces on. The half-blood Merinos and half-blood South-Downs (twenty-three) sheared eighty and one-half pounds of washed wool, seventy-one pounds of which I sold at thirty-eight cents per pound. During the summer of 1844, the flock were kept in good ordinary pasture, and salted once a week."

Thus, the Merino fleeces averaged 5 lbs. $13\frac{1}{2}$ oz. and sold for \$2 79 $\frac{3}{4}$ each ; and the grades between Merino and South-Down averaged 3 lbs. 8 oz. to the fleece, and sold for \$1 33 each.

It will be observed that four of the full-bloods (they were ewes) had two years' fleeces on. A two years' fleece will not weigh as much as two single years' fleeces from the same sheep. On the average, it will weigh about three-quarters as much.* On the other hand, the lot included two three-quarter-blood lamb fleeces, which would fall below the average weight of the others, and a portion of the flock were yearlings and two-year olds. The Merino never attains its maximum weight of fleece before three years old, and ordinarily not until four, and therefore the aggregate weight of wool of the 32 sheep, given above, does not, to say the least of it, give too favorable a view of the product of sheep of this quality. This is proved by the fact that my entire flock of full-bloods sheared about three-twentieths of an ounce over six pounds each, the succeeding year.

It would give me great pleasure to subjoin similar statistics of other carefully bred flocks, were authorized statements of them in my possession, or published within my knowledge.

It is sufficiently apparent from the above facts and estimates, that wool has not yet reached the lowest point at which it can be produced at an ample profit, on lands of the value indicated, if the sheep are of the proper

* That is to say, if the single years' fleeces would equal 6 lbs. each, a two years' fleece, instead of weighing twice as much, or 12 lbs., will not exceed three-quarters of such aggregate weight, or 9 lbs. The wool wastes when it becomes so long, and perhaps does not grow so rapidly.

quality; and these facts farther suggest the expediency of relying on our own efforts to "protect" this interest, rather than the fickle support of National legislation.

For the production of a cheap, wholesome, and highly nutritious food, no animal excels the sheep. Theoretical considerations, as well as experiment, show the superiority of mutton to pork in the formation of vigorous muscle;* and its tendency is less, particularly in hot climates, to engender inflammatory and putrid diseases. The consumption of considerable quantities of fat is indispensable, in cold climates, to supply the necessary amount of carbon to support "combustion," as Liebig terms it, in the lungs, or, in other words, to maintain the animal heat. Hence the Laplander and the Esquimaux find a grateful diet in train-oil, or the adipose parts of Arctic fish and mammalia. That fat pork should be the favorite meat, in the Northern States, is not perhaps so singular, but that it (under the name of bacon) should constitute the principal one consumed in our warm Southern latitudes, and especially that it should constitute so large a proportion of all the food consumed,† is indeed a most anomalous fact, and is utterly unparalleled among the practices of other nations occupying the same latitudes. The tendency of this practice to produce disease, physical inertia, indisposition and incapacity to sustain continued activity, will not, I think, be questioned by the pathologist or the close observer.

Mutton and lamb are a favorite, if not *the* favorite food of the English of all classes. Notwithstanding all that has been said and written of the "roast beef" of "Old England," mutton is more eaten there by people of every rank.‡ On the other hand, it is evidently *not* a favorite meat in the United States, though its proportionable consumption is evidently increasing. Whence the difference? Circumstances have led to habit, and habit, in a great measure, regulates appetite. It needs no other proof than is to be found in the experience of every individual, to show that the appetite is readily trained to relish what was even positively disgusting, and to become indifferent to what was once the most grateful.

That the preceding facts are well worthy of attention among those who are favorable to the introduction of sheep husbandry, among planters who supply not less than 3 lbs. per week of good bacon, or a full equivalent, to each slave, on plantations where the number ranges from ten to one hundred, and sometimes many more, there can be little doubt. Twenty-five slaves would thus consume 3,900 lbs. of bacon per annum; and the more common allowance of the opulent planter is about 200 lbs. per head, or 5,000 lbs. for twenty-five. If an equivalent for at least half of this was

* The theoretical considerations will be found sufficiently discussed in Liebig's "Animal Chemistry." For experimental evidence, I know of none that can be more depended on—which approaches any nearer actual demonstration—than that which is furnished by the English prize-fighters. To attain the proper condition to sustain the protracted and tremendous exertions of their brutal trade, their flesh must attain the hardness and toughness of whipcord, and they must, at the same time, maintain that physical elasticity (technically, "corkiness,") which adds agility to iron strength. These men, while training, are suffered to eat little or no adipose matter, and not even the *lean* of *pork*. Their animal food is exclusively beef or mutton, or both. Some trainers prefer the former, some the latter. I have seen this matter very fully alluded to, but do not now remember any more explicit authority than that contained in the following note to Carpenter's *Principles of Human Physiology*, (p. 357.)

† The method of training employed by Jackson, (celebrated trainer of prize-fighters in modern times,) as deduced from his answers to questions put to him by John Bell, was to begin on a clear foundation by an emetic and two or three purges. Beef and mutton, the lean of fat meat being preferred, constituted the principal food; veal, lamb and pork were said to be less digestible ('the last purges some men'). Fish was said to be a 'watery kind of diet,' and is employed by jockeys who wish to reduce weight by sweating.

‡ I mean this portion of the remark to apply more particularly to the non-laboring classes. The proportion consumed by the slave, though ample, is not excessive, when his laboring habits are taken into consideration.

† I state this on the authority of various individuals who have been much in England, and who have been placed in positions to form a pretty accurate opinion. Mr. Colman speaks of the "extraordinary" consumption of mutton in England, without, however, giving any comparative data.

made in mutton, it would be far cheaper, and, if I have not erred in previous statements, better for the slave.

There are two or three other highly favorable considerations to be taken into account among the direct profits of rearing sheep.

The risk by death, by ordinary causes, is nothing. Two per cent. is allowed in the preceding estimates, as the full product of wool and increase is carried out. But, in reality, the sheep never dies "insolvent." If the colt or the bullock dies on our hands, after two or three years of trouble and expense with it, the loss is nearly a total one. If the fine-wooled sheep dies at any age, the wool then on it, or what it has already produced, *more* than covers all the cost which it has ever made us.*

Not only is the winter manure of the sheep superior to that of any other domestic animal, the hog and fowl excepted, but it practically becomes still more so in proportion, in summer, when scattered over the pastures, by reason of the conditions in which it is deposited. The soft porous excrements of the cow† or horse, exposed to the exsiccatting action of sun and wind, evolve most of their fertilizing properties into the atmosphere, and this effect would increase in proportion to the warmth of the climate. The excrements of the sheep, on the other hand, are deposited in small, hard, rounded pellets, which fall down between the leaves of the grass, and are thus in a great measure protected from the sun and wind, until they are trodden into and incorporated with the soil.‡ Then, again, they need no spreading,|| like the dung of the horse and cow. And finally, instinct, in leading the sheep almost invariably to seek the summits of the elevations, in warm weather, for its night quarters, leads it to deposit much more manure in proportion, where it is most needed, on the drier and more barren hill-tops; and where, being more remote from water-courses, less of its juices are liable to be washed away by rains, into the streams, or on to the lands of others.

Sheep are also far more efficient than any other animal (if we except the worthless goat) in clearing up new lands, or neglected old ones, of those briars and shrubs which it is often difficult to eradicate without plowing; and they often abound on lands which cannot be plowed with profit. And, when plowed, the shrubs in the fence corners must be left (to the utter shame of all good husbandry), or the fence must be removed—sometimes at a great inconvenience. The sheep delights to browse on the buds, and to strip the bark of most shrubs,§ and they thus soon destroy them. It would be good economy for the farmer to keep his neighbors' sheep, without charge, on all very briery or coppiced unarable lands, if he could not so stock them himself.

Finally, it is generally believed by experienced flock-masters—and observation has led me to fully coincide in the opinion—that sheep not only improve the lands they depasture more than any other animal, but that they exert an almost specific influence in improving *the character of the vegetation*. All wild, poor grasses gradually disappear from their pastures.

* I speak, of course, of the cost of rearing and feeding.

† Gazzera found that 100 parts of recent cow-dung contain 25 per cent. of dry, solid matter, and that 5 per cent. of this is lost in 40 days by exposure to the air. I do not think this indicates the full loss which would be sustained in a southern latitude.

‡ These rounded pellets are covered, too, in the animal in good condition, with a coating of mucus, which farther protects them from evaporation.

|| Their urine, also, is voided in quantities which render it highly beneficial; while that of the horse and cow is voided in such large quantities in one place that it is not only in a great measure wasted, but in a dry time (so that it is not diluted by the moisture in the soil), its rich salts, as far from benefiting, actually kill the verdure.

§ This is particularly true of the blackberry or bramble (*Rubus villosus*), and the raspberry (*Rubus idaeus*), often great pests on new or neglected lands at the North. Sheep can even be made to attack the elder (*Sambucus canadensis var. pubescens*), and various other troublesome intruders, by turning them upon them in thawing "spells," in the winter, after they have been for some time confined to dry feed.

and are succeeded by the best ones; and the sward becomes remarkably dense and even. This is probably due to the richness and better distribution of their dung and urine.

If upward of twenty per cent. profits, over and above all expenditures, have been and still can be made, on lands worth \$20 per acre, by wool-growing—on lands, too, where the reign of an iron winter confines sheep to dry feed at least five months of the year—how are we to estimate those profits on lands costing but a small part of this sum, which, though inferior to the former, will, by reason of the shortness and mildness of the winter, support about an equal number of sheep per acre, and also save the expense of preparing dry feed, of foddering, and a large proportion of that laid out in barns, shelters, &c.?

It will be seen that, by assuming the data of the last of the two preceding estimates (with the exception of the loss by death), the gross cost of producing 300 lbs. of wool, on the grazing lands of New-York, is \$82 16, or $27\frac{9}{5}$ cts. per pound. This is undoubtedly as low as it can be produced where the fleeces do not exceed the average weight of 3 lbs. Let us now proceed to inquire what would be the gross expense per pound in the Southern States.

You inform me that “one or two—not more”—sheep find subsistence during the summer on the *natural* pastures of the *tide-water* zone in South Carolina.* The broad-tailed, and other large breeds, now mainly fed there, consume nearly double the amount of feed required by the fine-wooled sheep. But, to make our estimate perfectly a safe one, we will assume that two fine-wooled sheep only will consume the summer herbage of an acre. Fields of rye sown in September or October, you farther inform me, will support “two sheep and their lambs” per acre, “from the 20th of December to the 10th of March.” Numerically, then, here you have the same stocking that is borne by the lands of New-York, viz. three sheep per acre. And, making the allowance already alluded to for the different consumption of breeds, an acre would sustain three full-grown Merino sheep. As the rye subsequently yields its crop, the wool is not chargeable with the expense of its tillage.

Rye will continue to grow in the winter on all lands not too sterile, or too elevated, south of latitude 36° , and, in favorable situations, at least two degrees farther north. Grass, and some other hardy esculents, also maintain a winter vegetation in many portions of the whole of this region.†

R. L. Allen, Esq., after a recent visit to the plantation of Col. Wade Hampton, near Columbia, S. C., thus speaks of the winter verdure in that region :

“ Though everything like grass or weeds is rigidly excluded in the early stages of the crops, yet, as these approach maturity, the thick netting of crab and various other grasses and plants, which are ever struggling for existence in this warm clime, are allowed to come forward and mature; and their growth furnishes forage for cattle and sheep during the winter, and an important addition to the vegetable manures for turning under and adding to the fertility of the soil. . . . The sheep, together with the cattle, mules and horses, which are not at work, are turned into the natural pastures in summer, and, in addition to these, they have the run of the corn-fields in winter, and without seeing any other shelter against the severest storms than a thicket or hill-side, they thrive and fatten throughout the year.—This condition is secured by the mildness of the climate, and the consequent growth of vegetation during the entire winter.”

* [These statements, and all others credited to Col. Allston, are, when not otherwise specified, contained in letters from that gentleman to the writer.]

† Among these, “a plant called ‘Wild Rye,’ affording excellent herbage during the winter months, springs up spontaneously on the rice-field banks, and between the cotton beds, on some plantations on the River Congaree, S. C.”

John S. Skinner, Esq. thus writes me :*

"Col. Hampton's flock numbers 300, I believe. He kills the finest sort of mutton through out the winter and spring—very fat and excellent in all respects. He told me last summer, at Saratoga, that they never get a mouthful except what they can find in the woods and fields."

Hon. R. F. Simpson, Member of Congress, of Pendleton, South Carolina, thus describes the region in which he resides, and some of the contiguous ones :†

HENRY S. RANDALL, Esq.

WASHINGTON, Jan. 22, 1847.

Dear Sir: I take much pleasure in answering your inquiries, and only regret that I have not more time to do full justice to the subject. If my answers fail to inform you with sufficient clearness on any point, I shall be most happy to add to them, at your suggestion.

The Allegany Mountains, as you are aware, run from N. E. to S. W. That part of them north of the S. C. line lies spread out in different chains or ridges to a distance of nearly 50 miles; and the whole region is commonly called "on the mountains." The climate is healthy and the grass fine. Many of the valleys in this region are very rich, particularly on the water-courses. The ground is covered with snow as much as four weeks annually. The range is good, but there may be too much humidity for sheep.‡ The land is cheap, say \$1 per acre—but much can be bought at 50 cents. I have learned from good authority that sheep can be farmed out during the winter at *ten cents a head*, in any ordinary quantity. The farmers who take them, too, will be liable for loss by death, in many instances.

There is a strip of country lying east of the Blue Ridge, and parallel to it, from 20 to 30 miles wide, extending through North and South Carolina and Georgia, which I think especially adapted to sheep husbandry. The land is poor for the production of our southern staples, and is sparsely settled, but the pasture is good. There is a perennial grass, known as "woods grass," which springs up in the woods after they are burned each winter, which makes excellent pasture for all kinds of stock. It starts vigorously in the spring, and sheep fatten on it by the middle of July. It lasts all the summer, and provides sufficient food for sheep during the entire winter, except when snow is on the ground, which is not more than two or three days at a time, and usually not more than ten days during a winter.

The few days during which the grass is covered up with snow are the only ones, during the entire year, when it is necessary to feed sheep. This is usually done with oats in the sheaf. . . . Supposing ten sheep equal to one cow, I think one acre would afford subsistence to three sheep.

But few people mow here. In a few instances, herds-grass has been sown and mowed, but the product not weighed, to my knowledge. Both herds-grass and the natural ones, on our bottom lands, look much richer, and to all appearance would turn off a heavier crop of hay than any meadows to be seen on the line of travel through Virginia.

As I have before remarked, the land is poor, except the small bottoms on creeks and branches. The latter are rich, and will produce 30 bushels of corn and from 10 to 15 bushels of wheat per acre. They also produce oats and rye, but I do not know how much by measurement. I suppose from 10 to 20 bushels each. The land is valued low—from 50 cts. to \$1.50 per acre—and it is only necessary to buy \$500 or \$1,000 worth of it, to embrace sufficient bottom to raise provisions, and oats to feed sheep when snow is on the ground.—The range|| is very large, and everybody's stock has liberty to roam over it, without hindrance or compensation.

Our common method of managing sheep is as follows: The flock are kept in the plantation during the winter by some; others turn out in the woods. In May they are sheared, the lambs marked, &c., and they are turned into the out pastures. When they come up, they are salted, and no other attention is paid to them until fall, when most persons shear again. They are rarely brought up unless to get a lamb for the table. This treatment renders them wild, and prone to jump into the owners' or neighbors' wheat fields, from which they are driven out with rocks and sticks, and sometimes with dogs. They are, in all re-

* Jan. 15, 1847.

† This letter would have been more appropriately included in my IVth Letter, but was not received in time, and it is by far too valuable and interesting to be omitted.

‡ The effect of *humidity* on sheep is, I think, often misunderstood and greatly exaggerated. Wet, cold soils are uncongenial to sheep, but they suffer no more from those ordinary fogs and vapors which prevail in insular positions, or which are attracted by mountain ranges, than other domestic animals. As has been before remarked, sheep thrive in the peculiarly foggy atmosphere of England—also in Holland. Their healthiness on mountains is proverbial, yet these elevations are usually subject to fogs, and clouds rest on the sides or summits of the loftier ones. As the southern mountains are cleared of their trees, their atmosphere will be less humid, and that soft vegetable mould (which excited the fears of Mr. Buckley) will acquire the consistency which it always does on a dry foundation, when exposed to the sun and air; and it will be the means of supplying the sheep with rich vegetable nutriment, instead of poisoning them with "hoof-ail."

|| The provincial signification of this word, *South*, is the uninclosed pasture in the forest and "out fields,"—i. e., worn-out lands thrown out to commons.

spects, treated more like outlaws than domestic animals. When out, all the flocks in the neighborhood mingle together. From their disposition to ramble, and the incursions of dogs, they get scattered, and scarcely any farmer can get up to the fall shearing more than one-half of his count.

The region above described includes Pickens, Greenville and Spartansburg, so far as this State is concerned. Going east of this strip, you at once get into good land, where the settlements are frequent. Here snow is rare, and wheat, rye and barley are used for winter pastures for sheep, and they continue growing during the winter. Wood grass does not abound in this region, as the woods are not kept burnt.*

Very respectfully, yours, &c.

R. F. SIMPSON.

The preceding statements give a sufficient idea of the expense of feeding sheep in the Carolinas, Georgia, and the Gulf States. In all of these, there is a striking similarity in soils and natural products, and also in climate—with, perhaps, the exception of North Carolina, which is a trifle colder. In all of them, as well as in all the other Southern States, land can be bought at the same low prices.†

The cost of the winter forage of sheep in Tennessee may be inferred from the statements of Mr. Kramer, (in Letter IV.) On even the lofty Cumberland Mountains, in that State, grass grows during the entire winter, and snow rarely covers the ground to exceed forty-eight hours! Judge Beatty's statements in relation to Kentucky (in the same letter) show that the luxuriant blue-grass pastures of that State will sustain sheep during the entire winter; and that they frequently obtain their whole subsistence on the grasses, even on the mountains. Let us now turn to Virginia, the most northern of the Southern States. In a recent letter to me, John S. Skinner, Esq. says :

"Hon. Mr. Coles, a Member of Congress from Virginia†—a sedate, attentive and practical farmer—once informed me that his flock of 200 sheep, kept in good condition summer and winter, did not cost him \$10 a year. . . . You must know that they, in the general way, as I believe, never feed their sheep, winter or summer, except where the ground is covered with snow—which is rarely the case, and then the snow does not lie more than a day, or at most two days. . . . No doubt winter pasture might be provided by sowing rye in the proper season (the usual system is to sow it the last thing, and as long as the farmer can "catch a chance") and putting the ground in good condition; and in that way adequate provision might be made for any deficiency of natural pasture. . . . When the snow does cover the ground in Virginia, they give the sheep corn-blades—an excellent fodder. I think the rule was when I was a boy (in the rare exigency alluded to) to give them a bundle of blades each. A bundle of blades *compacted* would be about as large as the upper part of your arm."

North-Western Virginia seems to be considerably colder than the corresponding portion of the State east of the mountains; and the winter foddering season is not greatly shorter—though the amount of fodder consumed *must* be far less—than in Western Pennsylvania, or in many portions of New-York.|| Yet, singularly enough, more sheep are bred here in proportion, probably, than in any other portion of the Southern States!

* Some other paragraphs from this letter are omitted for quotation under the heads of which they specifically treat.

† Hon. S. Strong, a Member of Congress from this (N. Y.) State, writes me, after consultation with various Southern Members, that "good lands may be purchased for \$1 50 per acre, and in great abundance, in most of the Southern States."

Mr. Garret Andrews, of Wilkes Co., Georgia, in a communication in the American Agriculturist (April, 1844), says: "Several hundred acres (in the middle or hilly zone) are often sold for a dollar or less per acre. The usual rule is to sell the wood-land for what it may be thought to be worth, and give the purchaser the old lands and the houses for nothing. . . . For \$1,000 or \$1,500, a comfortable house and out-houses, garden, &c. may be had, with several hundred acres of land, . . . wanting nothing but a fair chance to become as fertile as may be desired. . . . There is no end of the materials for manure."

I recently saw it stated by a gentleman in a communication which was published in the N. Y. Farmer and Mechanic, that he was authorized to *give away* good land in the Cumberland Mountains to sober and industrious settlers.

The prices in the N. C. Mountains will be seen from Mr. Clingman's letter, (Letter IV.)

† Mr. Coles resided in Pittsylvania, a county adjoining North Carolina, in the middle or hilly zone.

|| Jessie Edgington, of Holliday's Cove, Brooke Co., Va., writes me: "Our average time of foddering is at least 4 months, and we generally provide provender equal to 5 tons of hay for each hundred grown sheep, for the winter."

This region being essentially Northern in its characteristics, no allusion will be had to it in subsequent remarks.

It will be seen from the preceding statements that in many, if not most situations, throughout the whole Southern States, sheep will obtain sufficient food throughout the year from the pastures,* or from autumn-sown grains, excepting on the higher or more northern mountains. As has been before remarked, as the grain subsequently yields its crop, its tillage is not properly chargeable among the expenses of producing wool. The preparation of hay, and labor of foddering, are also dispensed with. By the rule of estimation followed in relation to New-York, the items on the debit side of the account would then be—interest on purchase money; interest on land; expense of shearing; salt, tar, and general supervision; and loss by death. The items on the credit side would be the same with those of New-York.

Your own statements, Sir, as well as those of Mr. Simpson, show that, in many situations, both in the tide-water and hilly zone, three sheep can be supported on the herbage of an acre, without other fodder. His statements show that such lands can be bought at “from 50 cents to \$1 50 per acre.” The annual account then would stand thus :

Dr.	\$ cts.	Cr.	\$ cts.
100 sheep—to interest on purchase money, at \$1 25 per head.....	8 75	By 300 lbs. of wool at 31 cents per pound...	93 00
To interest on 33½ acres of land at \$1 50	3 50	“ 80 lambs, at 62½ cents per head.....	50 00
“ expense of shearing.....	4 00	“ Manuref	28 00
“ salt, tar, and general supervision	8 00	Total.....	171 00
“ loss by death 2 per cent. over and above value of pulled wool	2 50		
Total.....	26 75	Balance	144 25

Making \$4 32, or *two hundred and eighty-eight per cent. clear profit per acre, on lands worth \$1 50!*

By the respective estimates it will be seen that the gross cost of producing a pound of wool (allowing 3 lbs. to the fleece) is, in the Southern States, $8\frac{1}{2}$ cents; in New-York $27\frac{2}{5}$ cents†—or *nearly three and a half times* greater in the latter! I have put down the expense of shearing the same in both cases, and the supervision, South, twice as high as the *summer* care, in the North. Shearing always costs \$1 a day, per hand, in the North, and the summer care devolves upon the paid laborer whose every hour counts. The shearing would not be worth to exceed \$2 a hundred on a plantation where slaves are kept, and the supervision or care could scarcely be considered an expense, when it could be borne mainly, if not entirely, by superannuated or decrepit slaves, or even by children. The real expense of growing wool on land of this quality and price would be about $5\frac{1}{2}$ cents per pound;|| and calling the fleece 4 lbs. (which weight it always *ought* to be made to attain) it would but little exceed $3\frac{1}{2}$ cents.§ This is above Mr. Coles's estimate of expense in southern central Virginia, and Mr. John S. Skinner has repeatedly expressed the opinion that it could be grown in various parts of the Southern States at 3 cents per

* This supply could be rendered far more certain and available, where desirable, by leaving a portion of the fields undepastured in the latter part of summer and autumn. This “fog” or after-grass would not only afford much food, of itself, but it also greatly favors the sprouting of the young grass underneath it, by the protection it offers from frosts and cold winds.

† I have put this down the same as at the North, because I suppose it is just as valuable at the South, and quite as much needed. Few are disposed to appreciate the value of manure when it is not presented to their view in bulk, as in the barn-yard; but it is worth quite as much, dropped in the first instance over the fields. I feel confident that I have not over-estimated its value either for the South or the North.

|| To obtain these results, I divided the whole annual expense, as set down in the respective estimates, with the exception of the charge of 2 per cent. for loss by death, by the amount of wool produced. For reasons already given, I do not consider the wool chargeable with such loss by death, except in an estimate where the full product of wool and lambs is carried out.

§ In this estimate I call shearing \$2 per hundred, salt and tar \$1, and supervision nothing.

|| Estimated as in the preceding note.

pound.* My own impression, however, is that the land, properly inclosed, that will support 3 sheep per annum, will cost, except in occasional localities, not less than \$4 or \$5, let the amount be more or less; and this would bring the cost of production (with 3-lb. fleeces) to between 7 and 8 cents per pound. I shall hereafter assume it to be 8 cents.

On many of the more northern mountains of the Southern States, and on the high peaks farther south, neither the grasses nor grain grow sufficiently to support sheep, unless the range is very large in proportion to the number, during the winter.† Here, as in the Northern States, dry feed must be prepared for the winter subsistence of sheep. This can be readily done, as the best meadow grasses of the North and the clovers flourish on the sides of the mountains.‡ There is little doubt that sheep can be wintered on dry feed on many of the mountains, and yet, on account of the extreme cheapness of the lands, the cost of producing wool not exceed eight cents per pound.

In the circumstances of many of the lowland plantations, it would be a most economical arrangement to summer the sheep on the mountains, and then drive them to these plantations to be wintered on pasture, fog, or grain fields, according to convenience. After the lambs have reached a sufficient age in the spring, and the sheep are shorn, marked, &c., a flock might be sent thirty, fifty, or even a hundred miles to its summer range on the mountains, at a trifling expense; and large numbers could be kept there under the surveillance of a single shepherd and a brace or two of dogs. By this system the lowland plantation would be saved from maintaining pasture on more expensive lands; many of its less marketable products could be converted into wool, meat, and manure; and it would be enriched by the wintering of the sheep.

Such, you are aware, is the system of sheep husbandry in Spain. The sheep are wintered on the plains of Estremadura, sometimes reaching the north of Andalusia. Both of these provinces, though in a latitude corresponding with that of a portion of the United States, extending from Albemarle Sound to a little north of Philadelphia, are parched, during the summer, to a state of arid sterility, by the burning winds of Africa.|| In

* See *Monthly Journal of Agriculture*.

† With sufficient range, however, they not only obtain subsistence, but get fat. John S. Skinner, Esq., writes me: "In the mountains of Virginia, viz., at the Warm Springs, Dr. Brockenboro told me that a flock of sheep which he had bought for use during the watering season, strayed, and got off beyond reach during the summer; that the winter after they were rarely seen: and that as chance offered they were shot; and that finer and fatter mutton he never desired to see." The Warm Springs are in Bath county, among the Western or Allegany Mountains, a few minutes north of latitude 38°.

‡ See Mr. Goggin's statements in Letter IV. Since the above was written, I have received the following statements from Mr. W. Murdock, of Asheville, Buncombe county, North Carolina:

"Excellent swards of grass are grown in this district from Orchard grass or Cock's-foot. Timothy and Italian Rye grass I have found to thrive remarkably well. I never saw them do better in any country. I received my seeds from England, and they succeeded admirably, and in ground by no means favorable to a fair trial. Turnips succeed remarkably well here, and even 150 miles farther south, as I am informed by Mr. Edward Calhoun—the kinda I don't know—but here the Globe, Aberdeen, Norfolk, &c., do well. . . . If grounds were reserved as you suggest, for the winter feeding of sheep, the fall growth being under-pastured, and if some of the stubbles were plowed up and sown broadcast with turnips mixed with rape or colza, very little fodder will be required, in fact only when snow is on the ground, which seldom exceeds fifteen or twenty days during the year." [This fully confirms the positions assumed by me near the close of Letter IV.]

"I think that Curled Kale would be excellent for the winter keep of sheep, or cattle of any kind. I got some seed from England and sowed it like any cabbage seed. I put out the plants two feet asunder in but tolerable ground. It grew three feet high and two feet in diameter. That I planted in the open field the sheep got at in October, and ate it, stock, branches and all, to the ground. That planted in the garden has, like the rape, stood the severe frosts uninjured. It is a delightful vegetable all the spring, and stands a warm or a cold climate. . . . This and rape are, I think, all the green food necessary to keep sheep through the winter, with the addition of a little hay. Rape may be sown broadcast in moist weather in May or June, and mown off for the sheep, when required, about six inches above ground. If the shoots are not required for pasture, let them go to seed, and the feed will pay better than any other crop, for making oil and rape cake."

|| Here is a notable instance of the want of correspondence between isothermal and latitudinal lines between the west of Europe and the eastern portion of our own Continent. The two Spanish provinces the latitude of which is above given, have a climate more resembling the scorched *llanos* of Caracas than any portion, even the most southerly, of the United States.

the winter, however, they are covered with verdure. About the first of May the sheep start for the mountains.* Formerly many of them rested on the lofty *parameras* and mountain sides of Old and New Castile—the latter bleak, sterile and craggy, compared with the sides of our own Southern mountains. But a friend recently from Spain informs me that those once magnificent flocks (now, alas ! thinned by confiscation,† the wholesale plunder of invaders,‡ and for the subsistence of adverse armies,||) do not at present stop in any considerable numbers on the Castilian mountains, but pass north to the Cantabrian, and that portion of the Iberian range north of Soria—or crossing the latter, spread over the Eastern Pyrenees, and the mountains of Saragossa north of the Ebro.

Anything like an elaborate comparison between the facilities for sheep husbandry furnished by the mountains of Spain and the Appalachians of the United States, south of the Potomac, would, perhaps, be out of place in this connection. But a glance at them may throw useful light on the question of comparative profit. If the Spaniard can grow wool at a profit, where the natural and physical features of the country gives him no advantage over us, we can certainly do so ; for in every other respect we have the advantage.

The Eastern Pyrenees rise to a height of 10,000 feet,§ more than double that of the Peaks of Otter, or that of any other portion of the Appalachian range, with the exception of a few summits in North Carolina. Mount Perdu, one of the Pyrenees, is 11,283 feet in height,|| or 4,807 feet higher than the Black, the highest mountain of the United States east of the Mississippi. Maladetta, Vignemale and others rise considerably above 10,000 feet.** Glaciers exist on different parts of the whole chain. "The acclivity of the Pyrenees on the side of Spain, is often extremely steep,†† presenting a succession of rugged chasms, abrupt precipices, and huge masses of naked rock."†† Miñano, a Spanish writer of authority, in defending his countrymen from the charge of indolence, speaks particularly of the efforts of the hardy peasantry on the "almost inaccessible mountains of the Asturias, Galicia and Catalonia." The vegetation on these mountains is extremely variable, in some places being as luxuriant as the best on our Southern Appalachians, but more frequently dwarfish and meager. On large portions of them it is entirely wanting. The northern acclivities are frequently swept by cold and piercing gales from the Bay of Biscay. On the whole, it will be seen that they do not compare with our southern mountains in the advantages which they offer for sheep husbandry.|| ||

* For singular and interesting particulars in relation to their march, &c., and the municipal regulations pertaining thereto, see Livingston on Sheep, p. 36 *et supra*.

† Some of the choicest flocks in Spain were confiscated by the Government during the great anti-Gallic struggle. In the winter of 1809, the Spanish Junto confiscated the great flocks of the infamously celebrated Godoy and several other nobles, and they were bought by foreigners for exportation.

‡ The French Marshals, not finding anything in Spain to benefit the *fine arts of la belle France*, as in Italy, condescended, it is said, to benefit her *Agriculture*, by driving home some of the best flocks of Spain. The Allied Armies compelled the restitution of the *marble* and *canvas*, but those *priceless flocks* either could not be re-collected, or they were not regarded as of sufficient importance to be returned.

|| The Commissariat of the English, French and Spanish armies,

"The foe, the victim, and the fond ally,"

found the great Spanish flocks a very convenient resort, and availed themselves of it fully. The Guerillas, contrabandists, and fugitive inhabitants, of course, did the same.

§ Malte Brun.

|| Ib.

** Encyclopaedia Americana ; art. *Pyrenees*.

†† Montserrat (in Catalonia), so famous for its monastic establishments, will occur to you in this connection—where the steepness is so great that the monks ascend from hermitage to hermitage by ladders or stairs cut in the rocks !

†† Encyclopaedia Americana ; art. *Pyrenees*.

||| How much the associations of early life—early reading—dispose us to exaggerate even the physical extent of the region covered by these mountains, connected as they are with so many romantic and interesting remembrances ! The whole chain, extending from Cape Finisterre to Port Vendres, does not exceed 250 miles in length : and the space covered by it is not, in Western parlance, a "circumstance" to that occupied by our Southern Appalachians ! Yet, in the western half of this chain, Pelayo and his successors maintained their Visi-Gothic kingdom, overthrew the descendants of the Abdassides and Omnades, and finally wrested Spain from the Moorish yoke. Who remembers, without the map under his eye, that Ban

The route pursued by the Spanish flocks from, say, the middle of Estremadura to the Cantabrian mountains (the western portion of the Pyrenees), cannot fall short of 300 miles. It equals 270 miles in a direct line. In addition to the length of the journey, they are compelled to cross the Castilian mountains, and if they come from the south of Estremadura, also the mountains of Toledo. Their route to the eastern Pyrenees would be farther and still more difficult. Every circumstance, then, excepting *municipal* regulations,* gives our Southern States, on both sides of the Appalachians, a manifest advantage over Spain, for the purposes of migratory sheep husbandry.

Before closing the investigation of the question of the direct profits of wool-growing in the Southern States, it is proper to inquire if there are any special local militating causes or disadvantages not yet adverted to which should be taken into the account. Diligent investigation has satisfied me that there are no such causes—on the other hand, that there is a remarkable exemption from them—with one exception. That exception is the destruction caused by wolves and dogs.

Wolves are found in nearly all new, and particularly in mountainous countries; but they invariably rapidly give way before the extension of population.† They have even now ceased to be very destructive in the most sparsely settled regions of the South. Mr. Simpson, in the letter before quoted from, says :

"There are but few wolves in South Carolina, excepting on the mountains. Otherwise, our sheep which roam at large untended by shepherd, and uncared-for by any one, would soon be exterminated. The wolves are not numerous even on the mountains. They are not so destructive as dogs, which every now and then attack and destroy the sheep. A trusty shepherd, with a dog or two and a rifle, would prevent this."

These remarks would apply equally well to nearly all the Southern States. Wolves do but little damage, and would soon cease to do any; but the miserable, prowling curs are, in many places, a serious detriment. There is something singular in the fact that while so much complaint is made of them in the Southern and Western States, in New-York, where there is certainly a great surplus of them, we hear little, comparatively speaking, of their depredations. I am inclined to attribute it to the fact that dogs are here constantly familiarized with the sight of sheep. The first even playful movement of the adventurous puppy toward them is severely chastised, and he is thus educated to recognize them as within the category of "protected" animals. The dog which slays or even pursues a sheep, finds a long *pedigree* or a *silver collar* utterly unavailing to save him from immediate death.‡

But even in the South or West, the loss occasioned by the depredations

nockburn was fought and Flodden lost to defend a *Kingdom* of half the dimensions of a good-sized American *State*! In comparing the agricultural capabilities—and especially in estimating the ultimate result of agricultural competition between our own country and the European ones, we rarely take sufficiently into view the great disparity in territorial dimensions.

* For the monopoly of privileges conferred on the flock-masters of Spain to the oppression and prostration of every other branch of husbandry, see Lasterie, and also Livingston on Sheep.

† A bounty of \$10 is paid for the destruction of every full-grown wolf, and \$5 for a wolf's whelp in the State of New-York.

‡ In New-York it is provided by law that every bitch over three months old shall be taxed \$2; every additional one owned by the same man \$5; two dogs over 6 months old \$1; every additional one \$3. The avails of these taxes constitute a fund, out of which Supervisors of Counties are to pay for any sheep slain by dogs whose owners are unknown. This is not often enforced.

Any person may kill any dog "which he shall see chasing, worrying, or wounding any sheep," unless by direction of owner.

The owner or possessor of any dog on being notified "of any injury done by his dog to any sheep, or his dog having chased or worried any sheep," must within 48 hours kill his dog, or forfeit \$2 50, and the farther sum of \$1 25 for every 48 hours thereafter, unless "it shall satisfactorily appear to the Court that it was not in the power of such owner or possessor to kill such dog." Revised Statutes of New-York, vol. I. chap. xx., title xvii.

of other animals, or the expense of guarding against them, would be light compared with that in some of the wool-growing regions of the Old World.

In Australia, the sheep are exposed to the attack of wolves, dogs, and *convicts*, and are constantly attended by a shepherd, and nightly folded, and guarded by a watchman with dogs and a fire.*

At the Cape of Good Hope, the shepherd and folding system is also followed. In addition to wolves, and wild dogs which hunt in packs, and from their superior sagacity are much more formidable than wolves,† the Cape sheep are preyed upon by a variety of animals, and when they pass the mountains to glean the herbage which springs on the banks of the streams on the vast and lonely Karoos, they are exposed to the attack of the lion, the panther, the leopard, and the whole Feline family, so abundant and so particularly formidable in Southern Africa.‡ And they have had, and probably yet have, an enemy more destructive than all of these, in the Bushmen, more wild, irreclaimable, and predatory than their congeners, the Bedouins of the Arabian desert.||

I have seen it proposed§ to teach young cattle to protect sheep from dogs, in the following manner: Turn a few steers into the pasture with the sheep, and with them a cow or two, having young calves at their sides. Send a dog into the field, and immediately the cows, followed by the steers, will commence a furious onset on the dog, and gore him or drive him from the field. After this is repeated a few times, it is said the steers will suffer no dog to enter the inclosure.

This might do very well under some circumstances, but I should prefer to *rely* on the remedy proposed by Mr. Simpson: the *dog* and the *rifle*. There are no "shepherd dogs" large and powerful enough to encounter and *kill* wolves and vagrant dogs, excepting the great sheep-dog of Spain; and he is so irreclaimably ferocious to all excepting his charge, that he might frequently bring his owner into difficulty, and even endanger human life. My impression is that a shepherd dog or two, to be on the alert, and a brace of mastiffs to capture and, if need be, slay wolf or cur, would be adequate protection for the sheep on a considerable range, and the expense of maintaining them would be trifling.

* Cunningham's "Two Years in New South Wales," vol. i. p. 251.

† Missionary Labors and Scenes in Southern Africa, by Rev. Robert Moffat, pp. 23-4.

‡ The following stanza from the spirited lines of Freiligrath—"The Lion's Ride"—will occur to you:

"And the vulture scenting a coming carouse,
Sails, hoarsely screaming, down the sky;
The bloody hyena, be sure, is nigh,
Fierce pillager he of the charnel-house!
The panther, too, who strangles the Cape-Town sheep
As they lie asleep,
Athirst for his share in the slaughter, follows;
While the gore of their victim spreads like a pool in the sandy hollows!"

|| To these may be added the savage Kaffirs, who, in their recent struggle with the Colonial Government, destroyed and drove off immense numbers of cattle and sheep. In 1834, "the natives," says Youatt, "drove off or destroyed 80,000 cattle and sheep almost innumerable."

§ By a writer in the American Agriculturist.

TURNIP CULTURE—ITS ADVANTAGES.

WHEN we see to what a great extent the vast improvements in British husbandry rest on the turnip crop, we become reconciled to the space given to the subject in THE FARMERS' LIBRARY, from Stephens's Book of the Farm, and cannot forbear the wish that we could persuade American farmers to enter more heartily upon trials of turnip culture, as a part of their husbandry, eminently conducive to the support of stock in the winter, and to the accumulation of barn-yard manure—the great dependence, after all, for permanent and econom-

ical improvement; depending, however, for its value, always on the *nature* of the food out of which it is produced.

We are well aware of the difficulties, especially in the South, owing to severe drouth, and to expense of labor, especially when cultivated with the hoe. Still we are persuaded that the trials have not generally been conducted with sufficient care and perseverance—else how is it that some farmers uniformly succeed with this crop? We have seen again the past season a prodigious crop of Swedes, on Mr. Corning's farm, near Albany, under the judicious management of Mr. Sotham; and a gentleman who visited Marshfield, last autumn, told us that Mr. Webster had every promise of his usual success in the turnip department, and would probably have a crop of 5 or 6,000 bushels. One great good to be obtained by the turnip culture, if it could be combined with sheep feeding, would be that by that means light lands, from which it is now banished, might be appropriated to wheat, as has been done so successfully in Norfolk, England, in portions of the county as sandy as our Sussex in Delaware, or Caroline, or even the locomotive district around Snow-Hill, in Maryland. So true is this, that a late writer says: "Hence, good farmers in all parts of the kingdom have come to the unanimous conclusion that *no soil is too light to grow thriving crops of wheat, if only it be properly tilled.*"

Mr. Colman, too, speaking from personal observation, with his usual discrimination, says:

I believe our farmers would find a very great advantage in growing esculent vegetables for sheep and cattle, instead of keeping them, as is now done, through our long and severe winters, exclusively upon dry feed. They would be most useful for sheep in the lambing season, and for cows in milk; and though, in fattening properties, I know no article, all things considered, superior to our Indian corn, yet they certainly would come most beneficially in aid of that. I do not assert that turnips are the best crop for this purpose which can be grown, but Swedish turnips are certainly among the best. Mangel-wurzel, carrots, cabbages, parsnips, and potatoes, are all useful. I may recur to this subject again; but the conclusion to which I have myself come, and in which I am daily confirmed, and with which I wish the farmers of the United States could be more and more impressed, is, that an abundant supply of succulent food should be provided for their stock during our long winters—first, as conducive to the health of the stock; and next, as contributing essentially to the improvement of fattening stock, and as enabling the farmer to keep more stock; and lastly, as furnishing him with the best means of enriching his farm, and extending and improving all his other crops. These have been the

striking and universally-acknowledged results of such a system of husbandry here; and I have not a doubt that, in those parts of the United States from which the markets in our cities are to be supplied with beef and mutton, though, from the severity of our climate, it might with us be a more laborious process than here, and we could not have the advantage of feeding off our green crops on the lands where they grew, yet its great benefits would be an ample compensation for any extra expense or labor to which it might, in many situations, subject us. The difficulty and expense of procuring labor may present itself as an objection; but that will be continually diminishing. Improved machinery and new implements of husbandry are yearly affording increased facilities in cultivation; and, for our husbandry to be successful, it will require the liberal application of capital, added to enterprise, experiment, effort, and perseverance.

The following result of an experiment by Mr. J. Bloomfield, of Warham, Norfolk Co., to determine the best distance at which plants should stand, was given me by this excellent farmer, and will be curious to my readers. It was made upon Swede turnips. The row was twenty yards long.

Rows.	Number of turnips in each row.	Distance apart in the row.	Average weight of each turnip in the row.		Weight of all in the row.		Produce per acre topped and tailed.	
			Inches.	Lbs.	Stones.	Lbs.	Tons.	Cwt.
1	32	24		5 $\frac{1}{4}$		11 12	24	4
2	38	22		3 $\frac{1}{4}$		10 2	20	1
3	39	20		3 $\frac{1}{4}$		10	19	13
4	40	18		3		8 10	17	15

Fractions are omitted.. The stone is 14 pounds.

INDIAN CORN.

CROP OF MR. STEVENS AT HOBOKEN FIFTY YEARS AGO—THE PHILOSOPHY THAT SHOULD GOVERN THE OFFER OF PREMIUMS.

MR. EDITOR: About fifty years have elapsed since a wager of fifty guineas was laid between Mr. JOHN STEVENS, of Hoboken, (father of the Stevenses still so noted for going ahead in what they *do* undertake, whether by wind, steam, or horse power,) and DANIEL LUDLOW, Esq., of Westchester, who would make the *heaviest crop of Indian corn* on three acres. To avoid all doubt as to *measurement*, a precaution was taken which I recommend to all Agricultural Societies, to be enforced against competitors. Mr. Stevens sent a man to measure Ludlow's land and Ludlow sent one to measure Stevens's. Stevens won, making on the three acres 354 bushels and 6 quarts, being *one hundred and eighteen bushels and two quarts to the acre!* Mr. Ludlow 98 bushels and 14 quarts.

I send you the process for publication, if you will promise that no more premiums will be offered for heavy crops, except on condition that the crop shall exceed these, made fifty years ago, and that it be done by the instrumentality of some new and economical and profitable implement or mode of culture, that shall be pronounced a *discovery in agricultural economy*, and worthy of being followed as a new and *profitable* application of labor and capital. For, after all, that's the philosophy of the case, and the only view or conditions on which such premiums should be now awarded, after \$10,000 have been bestowed for the same old things; and the same may be said of many others besides heavy crops on small patches, if you overhaul the *old standing lists.* T.

We have no power over the case. We don't know what lingering old tastes and customs may still demand; but we will so far add to the story of this Hoboken prize crop, as to say that Mr. Ludlow planted his corn in continuous rows, about 4 feet apart and eight inches in the row, and applied 200 horse-cart loads of *street dirt*—while Mr. Stevens (see how as the old cock crows, so crows the young!) determined to go ahead "anyhow," plowed in *seven hundred loads of street manure!* and planted in *double* rows $5\frac{1}{2}$ feet asunder, and was at the pains of dibbling-in each grain over the three acres, "to do which with expedition and accuracy, he bored two rows of holes in a piece of board of about four feet long, so as to form equilateral triangles, the sides of which were seven inches, as thus:

Into these holes he drove pegs about $3\frac{1}{2}$ inches long. As the corn was dropped into these holes, made with this machine, a man followed with a basket of rotten dung, with which he filled them up. Then came on the carts, out of which the rows were sprinkled with a coat of *street manure*. During the season the crop was suckered three times. The intervals were frequently plowed, and the rows kept perfectly clean of weeds, by hoeing and *hand-weeding*.

"But extraordinary as this crop may appear, Mr. Stevens is confident that he should have had considerably more corn, had not his crop suffered very greatly by a thunder-storm, which laid the greater part of it down at the time the ears were setting."

It would be curious to know what price for this crop would have realized a fair agricultural profit? Is not, our correspondent correct in the suggestion that the true desideratum is, whose corn has realized for the cultivator the *most profit?* It is very well to stimulate wealthy amateurs to trials, without regard to expense, to see what *can* be done; but they don't need or want any of the little money that is to be had for *agricultural premiums*. Societies should give their premiums for demonstrations that may be followed with profit by farmers in ordinary circumstances, and above all for something new in principle, or new in its way, in our country, so as to keep the public agricultural mind, if we may so

express ourselves, always on the *qui vive*. Thus only can *progressive improvement* be secured. Why offer bounties, again and again, for experiments which do not look to any results beyond what we already know can be accomplished, and have long since, and a thousand times, been recorded in our annals as matters of agricultural history, together with accounts of the processes and materials employed in their accomplishment?

MAJOR P. REYBOLD, OF DELAWARE,

WITH SOME OF HIS DOINGS.

MAJOR R. is assuredly one of the *tallest* farmers in the United States. We will not here anticipate the fuller memoir which may hereafter be given of his "rise and progress;" but speak only in very general terms, of *himself*, his *sons*, his *sheep*, and his *peaches*. Suffice it to say that he has *risen*, from the cradle, not to strangle a serpent, like Hercules, but to be "well on toward" seven feet high in his stockings, and well formed in proportion! In this, however, there is no merit, as all is due to Nature and good nursing; but it is to his especial honor that he has risen from standing a respectable victualer, in the Philadelphia market, to the higher honor of being one of the largest, wealthiest, and most successful landholders in the State of Delaware—which, if she be *little*, contains *multum in parvo*, were it only that she contained such men as Thompson, and Jones, and Reybold, and Canby, and Clarke and "sich like," all leading farmers, and holding offices of the highest and most honorable kind, i. e. in *associations for the promotion of Education and Agriculture*.

Major P. Reybold has, in some respects, done more to strengthen if not to extend the Union, than even the *President of the United States* himself. In truth, few men in the Union have equaled him in the performance of the three cardinal and particular duties of man. These are said to be: to *build a house*, to become a *father*, and to *plant a tree*. Now, Major R. has built a "palace of a house," from the top of which (with all the modern improvements) one may behold under his feet little Delaware spread out like a garden, surrounded by New-Jersey, Maryland, and Pennsylvania. Next, he has begotten and has around him not less than *eleven children*, all thriving and "well to do in the world," with their several score of grand-children to amuse their grand-parents in their ripe old age. As if confident of the vigor and prolificity of his stock, in which he takes great delight, the Major built in his house a room about 60 feet long, for the young things to play in.

Then, as to the duty of *planting a tree*, which is more than some do, besides many ornamental and other trees, he has planted enough for himself and his sons to send to market last year 80,000 (not 800, but) 80,000 *baskets of peaches*, each holding about 3 pecks!

But we only meant to hold up to view a few of his sheep: He bred, and one year fed and fattened, 21 sheep, that weighed *alive* 4,294 lbs.—averaging upward of 200 lbs. weight. *Net weight* of the 21, 2,421 lbs.—or an average of rising 115 lbs. being more than 28 pounds to the quarter! Where has it been beaten in all ovine annals? The Patent-Office Report, from which this statement is supposed to be taken, (and which, being the story told by the *scales*, admits of no doubt,) goes on to say that their wool was long, *fine* and *silky*—such as is raised

for the finest worsted stuffs. In this, we take it, there is some play of the imagination which demands some allowance for "variation."

But the Major and his sons, animated by that determination never to be satisfied while anything remains to be done, and which alone can insure progressive improvement, sent out his son *Clayton* (a good name) to England to inspect all the crack flocks of the kingdom. Of that enterprise we shall give an account hereafter, as we mean to pay the Major a visit in "peach time." Enough now to say, that he brought home an *Oxfordshire* ram, represented to be an improvement on the *Cotswold*, which the old gentleman—and he looks at such things with a practiced eye—thinks would now, if fatted, weigh 60 pounds to the quarter! We shall have more to say of this Grand Sultan, and of the Sultanas that are on their way for his harem from England.

SCRAPS:

AMUSING, INSTRUCTIVE, OR CURIOUS.

GUANO.—McHENRY BOYD, Esq., of Hartford County, Md., where *guano* has been most freely used, says he finds the best system decidedly is to *spread and plow it in*. He would sooner use guano at 250 or 300 pounds to the acre, than have stable manure for nothing, if to be hauled two miles. 500 lbs. of guano have brought his land from 2 barrels of corn up to 8 or 10 barrels—that is, 40 or 50 bushels.

AYRSHIRE CATTLE.—Mr. Boyd, of Maryland, has quite a considerable herd of cows with more or less of this blood—some thorough, some mixed—and esteems them for the *dairy* in proportion to their degree of Ayrshire blood. Mr. Colt holds his Alderney cows at \$150.

BUTTER.—To remove the milk with or without the use of water? That is the question. Premium specimens have been obtained, after both processes. The nicest *potted* table butter we have seen this winter was from Mrs.—(we like to give the *housewife* credit where we can)—was from Mrs. HAMMOND's dairy, near Ellcott's Mills, Md. The milk was expressed altogether without the use of water.

PLANTING FRUIT TREES.—A writer in the *Cultivator* very aptly compares the practice of planting trees from a rich nursery into poorer land, to taking a horse from being well fed on oats and giving him *straw rations*. Twenty years' experience convinces him that fresh *hog* manure is best, particularly for *pears*, to be mixed well with the soil, as far as the roots extend. Every year or two a top-dressing should be plowed or spaded in.

(957)

HOT-BEDS.—In the same paper it is stated that hot-beds should be sunk in the ground to the depth of eighteen inches or two feet. They require a large supply of moisture, and if made wholly on the surface, they dry up so rapidly that they must be watered a great deal.

HOUSEKEEPING AND HOUSE MANAGEMENT.—About the most perfect for system, unexceptionable neatness and cleanliness, from garret to cellar, exactness marked by the greatest kindness in the treatment of the servants, the *ne plus ultra* in the cookery displayed upon the board, and invariable cheerfulness around it, is to be found at *Bellefield*, in Maryland, where, as on board ship, there is a place for everything and everything in place. True, some would jealously intimate that the *finger of the master* was to be seen here and there; but, for ourselves, we rather put our faith in the eye of the mistress; and, at all events, the lady who can get so much help from the gentleman must, it will be admitted, have *very winning ways with her*.

SMOKED MUTTON.—The Editor of the Tennessee Farmer, not having the fear of the swinish multitude before his eyes, declares his preference for the *ovine* over the *bovine* or the *swineish* race. He says, on his knowledge of physiology, which none will dispute, that a pound of lean, tender mutton can be procured for half the cost of the same quantity of fat pork; and that it is infinitely *healthier*, in summer especially; and that those who feed on it become more *muscular*, and can do more work on it, with more ease to themselves. He knows of nothing more delicious than *smoked mutton hams*. We can

readily believe it all; still we should prefer a ham of Commodore BALLARD's curing at Bedford, for *our eating!* especially if eaten, as canvas-backs only can be in real perfection, on the spot where they are killed.

SWELLING OF GRAIN BY BOILING.—The Edinburgh Journal of Agriculture gives, in the following table, the increase of bulk in different kinds of grain boiled for domestic animals to bursting:

4 measures of oats increased to 7 measures.
4 .. barley .. 10 ..
4 .. buckwheat .. 14 ..
4 .. Indian corn .. 13 ..
4 .. wheat .. 10 ..
4 .. rye .. 15 ..
4 .. beans .. 8½ ..

A good farmer of our acquaintance said that from long experience he considered the value of corn for hogs increased by boiling in the ratio of 25 to 10. [Cultivator.]

AGRICULTURAL REPOSITORIES.—There is one in the *American Institute* for placing models. There ought to be a Society expressly for the importation of all newly-invented machines, if the Institute has not the means or facilities of doing it—not gimcracks, but machines whereof the real usefulness appears to be well proved, and within the means of American agriculturists.

PRUNING.—The Editor of the London Gardner's Magazine, among the most accomplished botanists of this or any other day, says:

"We know, indeed, of but one general fact which may be—we would rather say, should be—invariably attended to, and that is the universal necessity of *keeping branches thin*. Light in abundance, and the freest circulation of air among leaves, are of vital importance to all plants; but these cannot be secured unless the branches are left thin. A crowd of branches implies a crowd of leaves, and in a crowd leaves can neither breathe, nor perspire, nor feed; in fact, they are smothered. But when they stand well apart, they breathe freely, perspire profusely, and feed incessantly; the result of which consists in fine, strong, stiff shoots, and dark green, fat leaves, instead of spindling twigs and yellow weasened foliage."

THE OHIO BUSHEL.—An act of the Ohio Legislature, passed the 8th February, 1847, fixes the following weights as the standard bushel of articles named, when sales are made by the bushel, without special agreement between the parties as to the measurement—that is to say:

Wheat.....	60 lbs	Rye.....	56 lbs.
Indian Corn.....	56 ..	Flax-seed.....	56 ..
Barley.....	48 ..	Clover-seed.....	64 ..
Oats.....	32 ..		

All right—everything susceptible of it should be sold by weight. Chickens ready for the spit are sold by the weight in New-York, as we have seen at the watering places; and they are getting in the way of it in the City. Who will

give us the usual weight of a bushel of *potatoes* and other vegetables? We don't mean rotten pot800000000's.

BINS.—The following table will show the capacity of bins; also the capability of greatly increasing them by enlarging the area of each:—A bin 6 feet square and 21 feet deep will contain 28 cubic yards of manure; do. 6 ft. 8 in. do. 21 do. 35 do.; do. 7 ft. 4 in. do. 21 do. 42 do.; do. 7 ft. 11 in. do. 21 do. 49 do.; do. 8 ft. 6 in. do. 21 do. 56 do.

TOP-DRESSING.—The great care now taken to preserve liquid manure, which was formerly allowed to run to waste, and the accounts of its fertilizing effects upon land, published almost weekly in the *Agricultural Gazette*, are proofs of the high value set on this form of manure; almost, indeed, a higher value than on the solid manure of the farm-yard. Agriculturists see the rapid effects of liquid manure on growing crops, without reflecting that the advantages of manure applied in a fluid state result not from any peculiar richness which it possesses, but from its being presented to the plant in a state of solution or minute subdivision, and therefore ready prepared for the food of vegetation.

STRAW MANURE.—Farmers must learn to distinguish more than they have done between the qualities of manure, and think less comparatively of quantity. Manure from cattle barely kept alive on straw is not worth hauling half a mile. Oil-cake is much used in England as food for cattle, but would not be were it not for the returns it makes in the quality of the manure.

LET this be held the farmer's creed:
For stock seek out the choicest breed;
In peace and plenty let them feed.
Your land sow with the best of seed;
Let it not dung nor dressing need;
Inclose, plow, reap, with care and speed,
And you will soon be rich indeed.

MUCH WANTED.—A list of French weights, measures and moneys, in ordinary use by French writers on agricultural and political economy and statistics.

If any one will have the kindness to supply it, we will ask the additional favor of his accepting a handsomely-bound copy of Guénon's famous cow-book.

THE MARVEL OF THE DAY is Guénon's book on *cattleology*. At a meeting in the Legislative Hall at Boston, several of the most respectable farmers in Massachusetts pronounced the signs laid down in that book for telling the milking properties of Cows, published in **THE FARMERS' LIBRARY**, to be infallible, after trial in many hundred cases! One gentleman said that a cow-keeper had better give \$100 for it than be without it.

THE SOCIETY FOR THE ENCOURAGEMENT OF NATIONAL INDUSTRY IN FRANCE offers, up to 1850, large premiums annually for the introduction of new plants, &c. from foreign countries, which may be useful in rural economy or the arts; and, after designating particular objects, they make a general offer of *twelve thousand francs* for the discovery which shall be adjudged the most useful in perfecting French industry in departments or branches in which France has not yet attained superiority over foreign countries.

VON THAER.—The Journal of Agriculture, published in Paris, places the name of this great agricultural writer (whose profound work on the Principles of Agriculture was published entire in the first volume of THE FARMERS' LIBRARY) at the head of the list of German writers; to whom it acknowledges France to owe great obligations for their contributions to agricultural literature. Yes—that's the word—“*litterature agricole*.”

OFFERS OF PREMIUMS.—The Central Society of Veterinary Medicine at Paris [we ought to have one in New-York] has offered premiums of 1,000 francs for the best Essay on the *peri-pneumonia*, or disease of the lungs in *cattle*; 500 for the best Essay on the periodical salivation or *slabbering* of *horses*; and 300 for the best on the *trembles* or convulsions in *sheep*. Now all these, and other Essays for which very large sums are paid in England and in France, are at our command for the benefit of the friends of THE FARMERS' LIBRARY, very soon after they have been published in Europe. We need hardly say that we shall endeavor to make the most of 'em.

GRAFTING-WAX.—I was surprised to see, in the January number of THE FARMERS' LIBRARY, that *clay* was used in grafting, instead of the *wax* the Yankees use. Ah! they are at least a hundred years before us. An equal quantity of beeswax, rosin and tallow, melted together and put on a strip of cotton, say an inch and a half wide, wrapped once around the graft, can be much easier and quicker done, and with greater success. When done in cold weather the wax can be made hot, and the strings dipped in.

MUNIFICENCE WELL BESTOWED.—We rejoice to see it stated that the British Government has granted a life pension of £100 to the widow of the late Mr. LOUDON, whose portrait and memoir have been published in THE FARMERS' LIBRARY, in consideration of the utility of his labors to promote and refine the arts of useful cultivation. How can a nation's funds be bestowed with more propriety than on the helpless widows of those who have preëminently aided to increase its means of subsistence, and to promote civilization. Alas! that it should be only in the patronage lavished by monarchs and despots on the military props of their power, that our Republican Government imitates them, with a fidelity as ill-judged as it is dangerous in its tendency to public liberty. As to Loudon's labors, *his wife* was a strong spoke in the wheel.

What rewards do we give to those who save us from war? The Emperor of China, being once asked how much he paid his physician, answered—“Liberally while I keep well, but nothing when he lets me get sick.”

“All honor should pay to the conquering SPADE!
That sword and spear are but barren things;
While to king in his pride, and his subjects beside,
Its bounties the spade of the gardener brings!”

VANACK CABBAGE

Is a variety with which we are not acquainted. It is, as will be seen, very highly commended in the following notice in a London paper, which we should esteem worthy of a place were it only for the suggestion, which we hope will not be lost on American Agricultural and Horticultural Societies, to wit—the importance of offering premiums not so much for the fattest, and the largest, and heaviest things, but for the *most genuine* of such varieties as are known to be valuable and worthy of preservation. What is wanting is to preserve that which is known to be excellent in quality, in its natural size and genuine characters; not to stimulate the growth of monsters in size or form, merely to amuse the childish and to attract the notice of the ignorant.

Would it not, let us repeat, be highly useful if a Society could be formed especially to import, without loss of time, new varieties of fruits and vegetables, and machinery more efficient and labor-saving than the best we have in use?

VANACK CABBAGE.—Of all the numerous sorts that have been offered to the public, this
(959)

cabbage has no rival. By a little care, it may come to the table young almost the whole year round. It is many years since I obtained some seeds from the Garden of the Horticultural Society, and I have never tasted any sort to be compared with it. It is now difficult to obtain it pure. It is easily known by its tendency to burst when it attains a considerable size. The long lists in nurserymen's catalogues might well be curtailed, and the Vanack placed at the head. Whatever single sort one may purchase by name is sure to turn out mixed, so careless have seedsmen become. I got some seeds under the name Vanack in Edinburgh, and, while almost every plant differed from another, there is not a true Vanack among them. It is a pity that the London Society does not give prizes for specimens of pure varieties of culinary vegetables, that the best may be kept up. It is right to place the *dulce* in the first rank, but the *utile* should not be forgotten.

THE PIG TRADE.—The last Report from the Patent Office gives us the value of the cotton crop, say 2,400,000 bales, at \$28 per bale, \$57,200,000. The pork *crop* in 1839 was upward of 26,000,000. Now it is estimated this weighed on the average 180 lbs. each, and that pork was worth \$3 50 per cwt., or \$160,000,000; and as but few hogs are kept over twelve months, we may safely calculate the *pork* crop as worth three times the cotton crop. We have often heard of the three crop system in Maryland, to wit: Negro makes corn; corn makes pork; pork makes Negro. Truly pork is of great value.

PRICES CURRENT.

[Corrected, March 24, for the Monthly Journal of Agriculture.]

ASHES—Pots, 1st sort.....	\$100 lb. 4 87½@—		Staves, White Oak, pipe, 1/2 M....	50 — @—
Pearls, 1st sort, '46.....	6 25½@—		Staves, White Oak, hhd.....	40 — @—
BEESWAX—American Yellow.....	— 27 @—		Staves, White Oak, bbl.....	30 — @—
CANDLES—Mould, Tallow, 1/2 lb.	— 9 @— 11		Staves, Red Oak, hhd.....	24 — @— 28
Sperm, Eastern and City.....	— 30 @— 38		Hoops.....	20 — @— 30
COTTON—From.....	1/2 lb. — 10 1/2@— 14		Scantling, Pine, Eastern.....	— — @—
COTTON BAGGING—American.....	— 12 1/2@— 13		Scantling, Oak.....	— — @—
CORDAGE—American.....	1/2 lb. — 11 @— 12		Timber, Oak.....	— 20 @— 30
DOMESTIC GOODS—Shirtings, 1/2 lb.	— 5 @— 11		Timber, White Pine.....	— 13 @— 20
Sheetings.....	— 7 @— 15		Timber, Georgia Yellow Pine	— 24 @— 28
FEATHERS—American, live.....	— 28 @— 32		Shingles	— 1 75 @— 2
FLAX—American.....	— 7 @— 8		Shingles, Cedar, 3 feet, 1st quality.	26 — @—
FLOUR & MEAL—Genesee, 1/2 bbl.	7 06½@ 7 12½		Shingles, Cedar, 3 feet, 2d quality.	22 — @— 24
Troy.....	7 06½@ 7 12½		Shingles, Cedar, 2 feet, 1st quality.	17 — @— 18
Michigan.....	7 06½@ 7 12½		Shingles, Cedar, 2 feet, 2d quality.	15 — @— 16
Ohio, Flat Hoop.....	7 06½@ 7 12½		Shingles, Cypress, 2 feet.....	13 — @— 14
Ohio, Round Hoop.....	— — @—		Shingles, Company.....	28 — @— 30
Ohio, via New-Orleans.....	— — @—		MUSTARD—American.....	— 16 @— 31
Pennsylvania.....	6 50 @—		NAILS—Wrought, 6d to 20d..	1/2 lb. — 10 @— 14
Brandywine.....	6 75 @—		Cut 4d to 40d.....	— 4 1/2@— 44
Georgetown.....	6 75 @—		PLASTER PARIS—1 ton.....	— — @—
Baltimore City Mills.....	6 50 @—		PROVISIONS—Beef, Mass, 1/2 bbl... .	11 50 @— 12
Richmond City Mills.....	8 — @— 8 50		Beef, Prime.....	8 62½@ 9 25
Richmond Country.....	6 75 @—		Pork, Mass, Ohio.....	14 25 @—
Alexandria, Petersburg, &c.....	6 50 @—		Pork, Prime, Ohio.....	12 25 @—
Rye Flour.....	4 75 @— 4 87½		Lard, Ohio.....	— 9 1/2@— 10 1/2
Corn Meal, Jersey and Brand.....	4 87½@ 5		Hams, Pickled.....	— 8 1/2@— 9 1/2
Corn Meal, Brandywine.....	22 50 @—		Shoulders, Pickled.....	— 6 @— 6 1/2
GRAIN—Wheat, White.....	1 65 @— 1 75		Sides, Pickled.....	— — @—
Wheat, Western, Red.....	— — @—		Beef, Smoked.....	— 1/2 lb. — 9 @— 10
Rye, Northern.....	— — @— 90		Butter, Orange County.....	— 20 @— 22
Corn, Jersey and North..... (meas.)	— 90 @— 95		Butter, Western Dairy.....	— 14 @— 16
Corn, Southern..... (measure)	— 85 @— 93		Butter, Grease.....	— — @—
Corn, Southern..... (weight)	— 85 @— 93		Cheese, in casks and boxes.....	— 7 @— 7 1/2
Oats, Northern.....	— — @—		SEEDS—Clover.....	— 1/2 lb. — 7 1/2@— 8
Oats, Jersey.....	— 41 @— 43		Timothy.....	— 17 @— 20
HAY—North River in bales, 1/2 ton.....	53 @— 56 1/2		Flax, Rough.....	— — @— 11 50
HEMP—American, dew-rotted..	ton 115 @— 130 —		SOAP—N. York, Brown.....	— 1/2 lb. — 3 1/2@— 5 1/2
" " water-rotted.....	150 @— 200 —		TALLOW—American Rendered	— 8 1/2@— 9
HOPS—1st sort 1846.....	— 8 1/2@— 10		TOBACCO—Virginia.....	— 1/2 lb. — 2 @— 6
IRON—American Pig, No. 1.....	— — @— 32 50		North Carolina.....	— — @—
" Common.....	22 50 @— 25 —		Kentucky and Missouri.....	— 3 @— 6 1/2
LIME—Thomaston.....	1/2 bbl. — — @— 93		WOOL—Am. Saxony, Fleece, 1/2 lb.	— 35 @— 37 1/2
LUMBER—Boards, N.R., 1/2 M. ft. clr. 30	— — @— 35 —		American Full Blood Merino	— 32 @— 34
Boards, Eastern Pine.....	— — @—		American 1/2 and 1/4 Merino.....	— 25 @— 27
Boards, Albany Pine.....	— 10 @— 18		American Native and 1/4 Merino.....	— 23 @— 25
Timber, Georgia Pine.....	1/2 M. ft. 24 @— 28 —		Superfine, Pulled.....	— 30 @— 32